SPEED TABLE

TIME PER MILE	MILES PER HOUR
36″	100
37″	97.3
38″	94.7
39″	92.3
40″	90
41″	87.8
42″	85.7
43″	83.7
44″	81.8
45″	80
46″	78.3
47″	76.6
48″	75
49″	73.5
50″	72
51″	70.6
52″	69.2
53″	67.9
54″	66.7
55″	65.5
56″	64.3
57″	63.2
58″	62.1
59″	61
1′00″	60
1′01″	59
1′02″	58.1
1′03″	57.1
1′04″	56.2
1′05″	55.4
1′06″	54.5
1′07″	53.7
1′08″	52.9
1′09″	52.2
1′10″	51.4
1′11″	50.7
1′12″	50
1′13″	49.3
1′14″	48.6
1′15″	48
1′16″	47.4
1′17″	46.8
1′18″	46.2
1′19″	45.6
1′20″	45
1′25″	42.4
1′30″	40
1′35″	37.9
1′40″	36
1′45″	34.3
1′50″	32.7
1′55″	31.3
2′00″	30
2′15″	26.7
2′30″	24
2′45″	21.8
3′00″	20
3′30″	17.1
4′00″	15
5′00″	12
6′00″	10
7′00″	8.6
7′30″	8
8′00″	7.5
10′00″	6

SOUTHERN PACIFIC COMPANY

WESTERN DIVISION SPECIAL INSTRUCTIONS

No. 12

EFFECTIVE SUNDAY, AUGUST 4, 1963
AT 12:01 A.M.,
PACIFIC STANDARD TIME
SUPERSEDING SPECIAL INSTRUCTIONS
No. 11

THESE INSTRUCTIONS CONSTITUTE A PART OF THE TIMETABLE CURRENTLY IN EFFECT

M. A. McINTYRE,
General Manager.

J. A. McKINNON,
R. D. SPENCE,
Assistant General Managers.

J. P. GRIFFIN,
General Superintendent of Transportation.

W. E. CORBETT,
Superintendent of Transportation.

D. R. KIRK,
Superintendent.

HOSPITAL DEPARTMENT SURGEONS

LOCATION	NAME	TITLE
San Francisco	Dr. V. M. Strange	Chief Surgeon
So. San Francisco	Dr. D. E. Julian	District Physician & Surgeon
Oakland	Dr. Ray A. Ericson	Aurist
Oakland	Dr. F. B. Parker	District Physician & Surgeon
Oakland	Dr. H. H. Appeldorn, Sr.	Division Surgeon
Oakland	Dr. H. H. Appeldorn, Jr.	District Physician & Surgeon
Oakland	Dr. H. W. Wolfsen	District Physician & Surgeon
Oakland	Dr. D. E. Dietrich	District Physician & Surgeon
Oakland	Dr. F. E. Rapp	District Physician & Surgeon
Oakland	Dr. Weldon Thyberg	District Physician & Surgeon
Oakland	Dr. Edmund H. Padden	Oculist
Oakland	Dr. R. A. Ericson	Oculist
Fruitvale	Dr. G. W. Dygert	Asst. Dist. Physician & Surgeon
Fruitvale	Dr. W. R. Wiesinger	Aurist
Fruitvale	Dr. H. P. Howell	Asst. Oculist & Aurist
Elmhurst	Dr. Theo. R. Stepman	District Physician & Surgeon
Berkeley	Dr. J. R. Masterson	District Physician & Surgeon
Berkeley	Dr. W. G. Donald	District Physician & Surgeon
Berkeley	Dr. H. G. Mankin	District Physician & Surgeon
Albany	Dr. Douglas Ream	District Physician & Surgeon
Richmond	Dr. Lawrence Brown	District Physician & Surgeon
Richmond	Dr. W. E. Cunningham	District Physician & Surgeon
Richmond	Dr. Douglas D. Vollan	Asst. Dist. Physician & Surgeon
Alameda	Dr. A. L. Guerra	District Physician & Surgeon
Alameda	Dr. W. C. Babcock	District Physician & Surgeon
San Leandro	Drs. Rudnick & Kessler	District Physicians & Surgeons
San Leandro	Dr. Theo. R. Stepman	District Physician & Surgeon
San Leandro	Dr. H. A. Duey	District Physician & Surgeon
San Leandro	Dr. Edwin Wortham	Oculist
San Lorenzo	Dr. Ramond C. Gallaghar	District Physician & Surgeon
Hayward	Dr. Keith West	District Physician & Surgeon
Hayward	Dr. Roy DeLaney, Jr.	District Physician & Surgeon
Rodeo	Dr. K. E. Stemmle	District Physician & Surgeon
Crockett	Dr. Samuel Eldridge	District Physician & Surgeon
Vallejo	Dr. Burton F. Jones	District Physician & Surgeon
Vallejo	Dr. G. J. Budd	District Physician & Surgeon
Vallejo	Dr. J. C. Miller	Asst. Dist. Physician & Surgeon
Napa	Dr. D. H. Murray	District Physician & Surgeon
St. Helena	Dr. M. M. Booth	Emergency Surgeon
Calistoga	Dr. Frank McGreane	District Physician & Surgeon
Benicia	Dr. B. T. Sanford	District Physician & Surgeon
Martinez	Dr. B. M. Whisenand	District Physician & Surgeon
Martinez	Dr. W. A. Fitzpatrick	District Physician & Surgeon
Concord	Dr. L. Robert Martin	District Physician & Surgeon
Walnut Creek	Dr. M. C. Bolender	Emergency Surgeon
Danville	Dr. John Blemer	Emergency Surgeon
Pittsburg	Dr. Claud L. Kerns	Emergency Surgeon
Antioch	Dr. Donald A. Gish	Emergency Surgeon
Suisun-Fairfield	Dr. Felix R. Rossi, Jr.	District Physician & Surgeon
Suisun-Fairfield	Dr. W. J. Olson	Asst. Dist. Physician & Surgeon
Suisun-Fairfield	Dr. Wm. R. Nesbitt	Asst. Dist. Physician & Surgeon
Vacaville	Dr. M. P. Stansbury	District Physician & Surgeon
Winters	Dr. E. A. Young	District Physician & Surgeon
Dixon	Dr. Alvin H. Gullock	Emergency Surgeon
Davis	Dr. Leo A. Cronan	Emergency Surgeon
Davis	Dr. Charles L. McKinney	Emergency Surgeon
Davis	Dr. T. Y. Cooper	Emergency Surgeon
Sacramento	Dr. W. W. Cress	Division Surgeon
Sacramento	Dr. A. F. Wallace	Division Surgeon
Sacramento	Dr. B. A. Daley	District Physician & Surgeon
Sacramento	Dr. W. N. Becker	District Physician & Surgeon
Sacramento	Dr. E. K. Perkins	District Physician & Surgeon
Sacramento	Dr. J. W. Harris	District Physician & Surgeon
Sacramento	Dr. K. Kossner	Aurist
Sacramento	Dr. E. V. Minasian	Oculist
Roseville	Dr. L. B. Jones	District Physician & Surgeon
Roseville	Dr. J. F. McAnally	Asst. Dist. Physician & Surgeon
Tracy	Dr. J. E. Longley	District Physician & Surgeon
Tracy	Dr. John C. Kimball	Asst. Dist. Physician & Surgeon
Tracy	Dr. H. L. McClelland	Asst. Dist. Physician & Surgeon
Stockton	Dr. H. T. Quinn	District Physician & Surgeon
Stockton	Dr. D. H. Powell	Oculist & Aurist
Stockton	Dr. J. R. Powell	Asst. Oculist
Lodi	Dr. L. J. Peterson	District Physician & Surgeon
Lockeford	Dr. N. P. Barbour	Emergency Surgeon
Ione	Dr. L. B. Gallager	Emergency Surgeon
Galt	Dr. V. E. Greer, Jr.	Emergency Surgeon
Oakdale	Dr. E. E. Chouret	District Physician & Surgeon
Oakdale	Dr. Raymond V. Mundall	Asst. Dist. Physician & Surgeon
Manteca	Dr. Benj. Taylor	Emergency Surgeon
Ripon	Dr. Gilbert Den Dulk	Emergency Surgeon
Modesto	Dr. R. R. Wilson	District Physician & Surgeon
Modesto	Dr. E. K. Fawcett	District Physician & Surgeon
Modesto	Dr. Robert Porcella	District Physician & Surgeon
Turlock	Dr. M. C. Colins	District Physician & Surgeon
Livingston	Dr. J. J. Wolohan	Emergency Surgeon
Atwater	Dr. Arthur P. Harris	District Physician & Surgeon
Merced	Dr. Wm. E. Fountain	District Physician & Surgeon
Merced	Dr. Shelby M. Hicks	Asst. Dist. Physician & Surgeon
Chowchilla	Dr. Herbert O. Leff	Emergency Surgeon
Chowchilla	Dr. A. B. Bigler	Emergency Surgeon
Fresno	Dr. F. E. Cooley	District Physician & Surgeon
Fresno	Dr. Richard H. Smiley	Asst. Dist. Physician & Surgeon
Fresno	Dr. H. E. Chandler	Asst. Dist. Physician & Surgeon
Fresno	Dr. Richard L. Jones	Asst. Dist. Physician & Surgeon
Patterson	Dr. E. Everett Lefforge	District Physician & Surgeon
Crows Landing	Dr. E. Everett Lefforge	District Physician & Surgeon
Newman	Dr. James E. Thompson	District Physician & Surgeon
Gustine	Dr. Ben R. Leonard	Emergency Surgeon
Los Banos	Dr. L. J. Lymp	District Physician & Surgeon
Dos Palos	Dr. P. F. Smith	District Physician & Surgeon
Firebaugh	Dr. C. A. Buttram	Emergency Surgeon
Kerman	Dr. Alvin Chaffin	District Physician & Surgeon
Riverdale	Dr. R. A. Hunt	Emergency Surgeon
Niles	Dr. E. C. Grau	District Physician & Surgeon
Pleasanton	Dr. Harold J. Shanks	District Physician & Surgeon
Livermore	Dr. C. W. Norris	District Physician & Surgeon
Santa Clara	Dr. H. G. Cleary	District Physician & Surgeon
San Jose	Dr. D. R. Threfall	District Physician & Surgeon
San Jose	Dr. John Watson	District Physician & Surgeon
San Jose	Dr. V. S. Matthews	District Physician & Surgeon
San Jose	Dr. H. G. Cleary	District Physician & Surgeon
San Jose	Dr. J. M. Hohl	Asst. Dist. Physician & Surgeon
San Jose	Dr. P. T. Pace	Aurist
San Jose	Dr. Albert Buckwald	Aurist
San Jose	Dr. Stanley T. Robinson	Oculist
San Jose	Dr. Peter Parisi	Oculist
San Jose	Dr. Jay Overmeyer	Oculist
San Jose	Dr. Norman Buys	Oculist

NOTE.—Emergency Surgeons should only be summoned for temporary treatment when prompt attention is required and when patients cannot be sent to, or await arrival of, Division or District Surgeon.

HOSPITALS

GENERAL HOSPITAL	SAN FRANCISCO
EMERGENCY HOSPITAL	SACRAMENTO
EMERGENCY HOSPITAL	WEST OAKLAND
EMERGENCY HOSPITAL	FRESNO

WATCH INSPECTORS

K. I. Dunlap, Mgr. of Time Service	65 Market St., San Francisco
San Francisco	A. Solari, 745 Third St.
Oakland	Evan J. Sawyer, 1624 Franklin St.
Oakland	Don J. Allphin, 5836 Foothill Blvd.
Oakland	Lesslie's Jewelry, 7525 MacArthur Blvd.
Alameda	D. A. Holker, 1251 Park St.
Berkeley	C. H. Lee Jeweler, 2210 Shattuck Ave.
Richmond	Stribley Jewelers, 1013 McDonald Ave.
San Lorenzo	Kurt J. Prosch, 545 Paseo Grande
Stockton	W. K. Banks & Son, 111 No. San Joaquin St.
Lodi	Donnell Guptill, 22 S. School St.
Benicia	Curt S. Appe
Vallejo	Frank Lovegod, 617 Marin St.
Fairfield	C. L. Pegar
Crockett	A. Ghioldi
Calistoga	W. A. Stone
Sacramento	Grebitus & Sons, 1108 "J" Street
Roseville	Verne Martin, 245 Vernon St.
Martinez	O. J. Danielson, Beard's Jewelers
Pittsburg	Woulf & Ury
Antioch	Clarks Jewelers
Tracy	L. H. Jolley
Niles	Hoyle Easley, 513 First St.
San Jose	Frank Scholes, 33 N. First Street
Newman	Beall & Brown, Jewelers
Los Banos	Machado's 636 I St.
Fresno	Ken Fries, 511 Helm Building
Fresno	Geo. E. Crain, 4421-B East Shields St.
Madera	T. H. Elliott, 348 E. Yosemite Ave.
Modesto	Shoemake's, 1323 Jay St.
Turlock	D. F. Hall

RULE A. Employes must have copy of Rules and Regulations of the Transportation Department effective July 1, 1960, with page revisions as listed on page 1 revised April 1, 1961.

RULE M. Employes are warned that it is dangerous to ride on top or side of cars while passing points where impaired clearance exists, and that they must protect themselves from injury. See list of impaired clearances on main track and siding.

There are numerous other structures with impaired clearance on yard and station tracks on the division, and employes must be familiar with their location and avoid personal injury.

Employes are prohibited from riding or walking on the roof of any moving car.

(Exception: Employes may ride on the roof of cars when necessary during switching operations, but must not cross from the roof of one car to another while in motion.)

RULE 1. Form prescribed for recording variations of standard clock with time signal has been discontinued.

RULE 10-H. On the following branches:

Biola
Calistoga
Winters
Union
Schellville
Vallejo
San Ramon
Stonehurst
Riverdale
Oakdale
Kentucky House
Woodbridge
Ione

a green signal will not be displayed to the right of each track at the limit of restrictions. Instead, limit of restriction will be indicated by a yellow signal displayed to the left of track in direction of approach. Speed may be resumed when engine reaches the yellow signal so displayed, or when it is known by engineer that rear of train has passed the limit of restriction as specified in train order or timetable bulletin.

RULES 10-G, 10-H and 10-I. When unattended red flags or red lights, yellow signals, red CONDITIONAL STOP signs and yellow PROCEED PREPARED TO STOP signs are displayed between siding switches, they must be duplicated to the right of the siding in direction of approach. If clearance between siding and main track does not permit display of these signals to the right of the siding in direction of approach, signals may be displayed to the left of the siding. Display of these signals to the left of a siding in direction of approach must be respected as though they were displayed in accordance with these rules.

RULE 10-J. Speed signs prescribing an increase in speed will not be installed on branches. Speed Restrictions tables will indicate permissible speeds between mile post locations named.

RULE 19. Last sentence of Item (5), Rule 19, reading: "Red light must be extinguished and green light displayed when train has stopped clear of main track to be met or passed by another train outside of block system limits." is CANCELLED.

RULE 26. On diesel fueling tracks at West Oakland diesel shop and Tracy Diesel track, a blue light will not be attached to reflectorized blue "Men at Work" signs when displayed at night.

RULE S-72. Westward trains are superior to trains of the same class in the opposite direction, except Train 52 is superior to Train 54, Lathrop to Tracy.

RULE 84. Passenger trains making station stop where rear end of train cannot be seen from the head end due to curvature of track, foggy or stormy weather, engineer will recall flagman from the rear as prescribed by Rule 14(d) or 14(e), as the case may be. When all passengers on rear of train have been loaded, flagman will sound signal 16(k) which will be answered by the engineer with signal 14(g). Train will not proceed until signal is given by trainman on head end of train.

RULE 98. Cars must not be kicked, dropped or shoved over railroad crossings not protected by interlocking, unless movement is protected.

RULE 105. Sidings designated "E" in Capacity of Sidings column are assigned for use by eastward trains; those designated "W" are assigned for use by westward trains. Those designated "M" for middle, may be used by trains in either direction. Those designated "N," "S," "1," "2" or "3" are assigned for use by trains as shown in special instructions for the subdivision on which located.

Capacity of Sidings column indicates the number of cars of average length of 49 feet that siding will hold between fouling points, in addition to one engine and caboose.

When length of train and/or capacity of siding permits, trains taking siding after clearing main track will provide not less than 400 additional feet clearance to fouling points.

RULE 107. Freight trains and engines must avoid passing between stations and loading tracks when passenger trains are closely approaching from opposite direction on double track, and care must be exercised by non-stopping passenger trains when approaching stations at about the same time that other passenger trains are approaching from the opposite direction. When practicable non-stopping trains are to be given preference, but each train must be operated in a manner to avoid confusion and hazard of personal injury.

RULE 206-B. When rubber stamp and printed train order form are used for issuance of Form Y train order, train dispatcher after recording form in train order book with stamp is required to write and transmit only the order number, addresses, mile post locations, stations, times and dates. Train order operators using the printed form for such train orders are required to copy and repeat only that portion of the order transmitted by the train dispatcher.

RULE 283. Movements governed by semaphore type diverging route signals displaying "Proceed on Diverging Route", Figs. A and B, must be made with caution.

RULES 281 and 285. Movements against the current of traffic governed by semaphore type dwarf signals displaying "Proceed", Fig. E, Rule 281; or by light type dwarf signals displaying "Proceed not Exceeding Medium Speed.", Fig. G, Rule 285, must be made with caution and position of switches observed.

RULE 505. AUTOMATIC BLOCK SIGNAL SYSTEM

PUSH BUTTONS

Where signal protection is provided for movements from an adjacent track to main track, push buttons and pilot lights are installed in box near each of the two signals, with time-release feature, to clear signals on one track when the control circuit on the other track is occupied.

Train on main track to let train on siding pass may clear signal on siding by pressing button bearing number of signal on siding. Train on siding to let train on main track pass should not pass Approach Circuit sign, but when necessary to do so, may clear signal on main track by pressing button bearing number of signal on main track.

Further instructions posted inside push-button box.

ELECTRIC SWITCH LOCKS

Where electric switch locks are installed, lock box door must not be opened if movement is to be made into a track leading from main track until engine or car is standing within 150 feet of the switch; or if movement is to be made from such track, or through a crossover to a main track, until block indicator indicates block clear on opposite track. Within CTC limits train dispatcher's permission must also be obtained before lock box door is opened.

After lock box door is opened lock lever cannot be moved to opposite position to release switch for hand throwing until indicator in lock box indicates "unlocked".

Lock lever must not be returned to locked position until all movements over the switch are completed, switch returned to normal position and locked, after which lock box door must be closed and locked. Within CTC limits train dispatcher must also be notified by telephone when completed.

When block indicators indicate "block occupied," instructions posted inside lock box for operation of push button to start time-release must be complied with if movement is to be made to main track while approach circuit is occupied by another train, in addition to providing flag protection when necessary.

Low type electric locks, such as are applied direct to lever of hub type switch stands, function as above except that the removal of the switch lock has the same effect as opening the lock box door. Instead of being equipped with an "unlocked" indicator, these locks have a pilot light that indicates by illumination when the lock is unlocked.

When pilot light will not illuminate to indicate electric lock is unlocked, push button on adjacent cast iron box, protected with cover and locked with switch lock, should be depressed to illuminate green light. After a time interval of from one to seven minutes pilot light on electric lock will be illuminated, indicating lock is unlocked.

Emergency lock release to be used only in case of electrical or mechanical failure, as indicated by failure of time-release to function after several minutes. When necessary to break seal on emergency lock release, train dispatcher must be notified immediately, and movement made only after flag protection provided on both tracks.

MECHANICAL SWITCH LOCKS

After lock box door is opened lock lever may be moved upward against stop. After a time interval of from one to seven minutes indicator will show UNLOCKED and lever may be moved to reverse position "R". Switch may then be operated in usual manner.

Lock lever must not be returned to normal position "N" until all movements over the switch are completed, switch returned to normal position and locked.

Emergency lock release to be used only in case of mechanical failure, as indicated by failure of time release to function after several minutes. When necessary to break seal on emergency release, train dispatcher must be notified immediately and movement made only after necessary flag protection is provided.

RULE 605. INTERLOCKING

Trains and engines must not enter main track within interlocking limits where no signal governs such movement until permission has been obtained from signal operator, and must then run with caution not exceeding 12 MPH to the next signal.

Movements governed by dwarf signals must be made with caution and position of switches observed, as such signals govern movements for various routes.

Dual control switches within interlocking limits are under the control of signal operator. When necessary to hand-throw these switches, permission must be obtained from signal operator and be governed by Rules 771 and 772.

At all interlockings, when route lined is not to be used, following engine whistle signal will be sounded: o o — o o.

RULE 663(b). When movements are made over dual control switches under provisions of this rule, dual control switches must be placed in hand position, hand operated in accordance with Rule 772, and locked until movement over the switch has been completed.

CENTRALIZED TRAFFIC CONTROL

RULE 765. Hand operated switches within A-PB or CTC limits must not be operated without permission from train dispatcher and where main track hand operated switches are not equipped with electric or mechanical switch locks and maximum authorized speed is in excess of 20 MPH, trains and engines using such switches must occupy main track continuously or leave main track switch open while work is being performed. Such tracks must not be used by trains or engines for the meeting or passing of trains. Except between El Pinal and Polk at locations where entrance to main track is governed by automatic block signals, Rule 778 will apply.

RULE 776. Trains authorized by train dispatcher to pass absolute signal displaying stop indication and to proceed at restricted speed under provisions of this rule, may resume normal speed after rear of train passes next block signal displaying green aspect.

GENERAL REGULATIONS

RULE 808. In case of grade crossing accident, it is permissible for crew members on request of law enforcement officers to furnish their names, occupations and addresses, identification of the train; confirmation that the whistle, bell and headlight or headlights were operating; and direction of the vehicle. Signed statements are not to be given. Should police officers desire any additional information, they should be courteously referred to Claims Department representative.

RULE 836. When necessary to shove cars ahead of engine between stations on descending grade, cars must be chained to the engine unless air brakes are operative on all cars and air cut in.

RULE 872. Enginemen taking charge of engines at West Oakland Diesel Shop and Tracy will consider engines as having been amply supplied with water, fuel, sand, prescribed signals, tools, supplies and flagging equipment in serviceable condition.

RULE 873. Sanders must not be operated between absolute or interlocking signals governing movements over dual control or power operated switches or spring switches.

AIR BRAKE RULES

RULE 2-B. FREIGHT TRAINS.

Dynamic brake on head end of freight trains must not exceed four 6-axle units, six 4-axle units or any combination of both which totals 24-axles of dynamic braking except, dynamic brake on DF-1 to DF-13 classes is limited to five units.

Trailing EMD units are capable of dynamic braking when connected to the lead unit with a field loop jumper.

A DF class Alco unit is capable of dynamic braking when its dynamic brake cut-out switch is closed; when the switch is open, the dynamic brake will not operate on the unit.

Field loop jumpers are only required in Alco units to permit the dynamic brake to operate on trailing EMD unit.

RULE 3. Standard brake pipe pressure for Holiday Mail and Express trains, Nos. 377 (PCW), 378 (PCE), 375 (Starpacer), Adv. FMS, FMS, and WCM is 90 pounds.

RULE 11. Cars equipped with brake cylinder release valve may have one or two operating release rods. Operating rods connected to brake cylinder release valve may be identified by stencil reading—"Br. Cyl. Rel." or by a diamond shaped stencil or by noting that ends of release rod form a small closed circle. Air brakes can be released on cars equipped with brake cylinder release valve by a hard momentary pull on release rod afterbrake pipe pressure has been depleted.

RULE 23. Gondola cars SP-345000 to 345669 are equipped with AB brake system which has automatic changeover feature to provide proper brake function when car is loaded and when empty. Before leaving a station or point where such cars have been added to the consist or where crews are changed, the outgoing engineer must actuate the automatic change-over feature by reducing brake pipe pressure to below 30 pounds whether cars are loaded or empty.

RULE 38-A. Will not apply at Fresno or Sacramento except incoming engineer after completing stop will make a full service brake application, leaving brakes applied. Running test in compliance with Rule 39 must be made as soon as speed permits after train departs terminal.

MISCELLANEOUS

5. Helper service:

(a) Helper engines must not be placed behind wooden underframe equipment.

(b) Helper engines consisting of not more than two units may be placed behind caboose.

(c) Helper engines consisting of not more than four units may be placed immediately ahead of caboose.

Air will be cut in on all helper engines, and engine must not be cut off when train is in motion.

6. Unless otherwise authorized, trains handling passenger cars with flat spots on wheels in excess of 3¼ inches in length must not exceed 10 MPH. When flat spots are not in excess of 3¼ inches long such cars may be operated at maximum authorized speeds.

27. Should a passenger train be stopped in a tunnel, air conditioned cars within the tunnel must immediately have the air conditioning systems, including ice engines and engine generators, shut off, fresh air intake shutters closed, and blower fans shut off.

Should a train be stopped with the engine in a tunnel and it is found that, in the case of a passenger train it cannot be moved within five minutes after stopping, and in case of a freight train it cannot be moved within a reasonable length of time, trainmen and enginemen must take necessary precautions to prevent movement. Independent brake and sufficient hand brakes must be immediately applied. Engine wheels must be secured by blocks and chains, and power plants and steam generators, if any, on engine shut down.

28. DF and DP class engines operated with engineer in other than the lead unit in direction of movement, must not exceed 20 MPH when approaching highway or street crossings at grade, subject to further restriction imposed by local conditions.

SPEED RESTRICTIONS FOR ENGINES: Maximum speed shown below is subject to further restrictions applicable to certain territories as shown in Speed Restrictions for Trains:

NOMINAL CLASS	RUNNING FORWARD WITH TRAIN OR LIGHT	RUNNING BACKWARD WITH TRAIN OR LIGHT
DF-1 to 12 with 60/17 gear ratio trucks	79	#30
DF-1 to 15 with 61/16 gear ratio trucks	75	#30
DF-1 to 14 with 62/15 gear ratio trucks	70	#30
DF-100	65	##65
DF-101, 103 to 107, 109 to 112	35*	##35*
DF-115, 119, 123, 136	65	##65
DF-114, 117 with 62/15 gear ratio trucks	65	##65
DF-114, 117 with 65/12 gear ratio trucks	55	##55
DF-116, 118, 120	70	##70
DF-121, 122, 124, 125	70	##70
DF-127	65	##65
DF-500, 501	70	##70
DF-502	70	##70
DF-600, 601	70	##70
DF-602, 603, 606 with 60/17 gear ratio trucks	79	##79
DF-602, 603, 606 with 61/16 gear ratio trucks	75	##75
DF-604, 605, 607 to 616	70	##70
DF-617 to 622	75	##75
DF-800	70	#30
DP-4, 7, 12	79	#30
DP-5, 6, 8, 9, 10, 11	79	#30
DP-13	79	#30
DS-1, 4, 5	45	45
DS-6 to 12	60	60
DS-100 to 108, 110 to 115, 117 to 122	60	##60
DS-109	65	65
DS-200 to 205	35	35
DS-300 to 302	35	##35*
DS-303	65	##65
DS-400 to 402	65	##65
DS-500 to 506	55	##55
DS-600 to 606	65	##65
DS-607	60	##60
RDC	79	#30
Any Steam or Diesel Engine Not Listed	35	25

#When on head end of train or running light and engineer is in other than leading control cab in direction of movement.

##When operated in multiple unit control with engineer in other than lead unit in direction of movement must not exceed 30 MPH.

*On less than 90-lb. rail must not exceed 25 MPH.

Maximum speed of engines under following conditions, running under own steam, or hauled in train:

When all weight has been removed from any one pair of drivers	20 MPH
When all weight has been removed from only one wheel of any pair of drivers	30 MPH
When engine truck is removed	20 MPH
When main rod only is removed	30 MPH
When side rod only is removed	30 MPH
When both main and side rods are removed	20 MPH

Dead diesel engines hauled in train and weighing 150,000 pounds or more must be placed one car behind engine handling the train. If weight is less than 150,000 pounds dead diesel engines must be placed near rear of train.

Dead steam engines hauled in train and weighing 150,000 pounds or more on drivers must, as far as practicable, be cut in between 25 and 30 cars from the head end of the train but in no event less than 8 cars from engine handling the train. If weight is less than 150,000 pounds on drivers dead steam engines must be placed near rear of train.

Unless otherwise restricted, not more than two dead steam engines shall be moved in any one train and when so moved they must be separated by five cars. When an S or SE class and a road engine are moved dead in train, a steel underframe freight car must be placed between them and S or SE class engine entrained with tender ahead.

Maximum speed of trains handling dead engines of S or SE class 20 MPH; other steam engines 40 MPH; and diesel engines the speed shown for same engine running forward light, except DS-200, 201 class must have traction motor brushes removed and speed restricted to 30 MPH.

Dead or disabled engines, and equipment listed in timetable which requires movement at reduced speed must first be reported as ready to move to the chief train dispatcher, who will designate the train in which the engine is to be moved. Any such engine must not be handled in train until train order designating maximum speed is issued.

Movement of foreign line engines, in service or dead in train, must not be authorized until provisions of current Line Clearance Circular have been complied with.

Sacramento Northern engines will not exceed speed restrictions for engines shown on Page 12 of Sacramento Northern Railway Timetable and maximum speed is subject to further restrictions for trains.

SPECIAL INSTRUCTIONS—ALL SUBDIVISIONS

MAXIMUM SPEED PERMITTED WITH CERTAIN EQUIPMENT	MPH MAIN TRACKS OTHER THAN BRANCHES	MPH MAIN TRACKS ON BRANCHES
Double or triple loads	..	25
Scale test cars	40	30
except SPMW-2024	65	49
Cars with arch bar trucks	40	30
Steel pile drivers, except:	40*	30*
SPMW 4088 and 5479 (locomotive crane piledrivers)	45*	35*
Wooden pile-drivers	..	25*
Relief outfits with steam derrick, except:	45*	25*
Nos. 7000 and 7010 on San Ramon Branch	..	10
Nos. 7000 and 7010 must not operate between Larkmead and Calistoga on Calistoga Branch.		
Nos. 7000 and 7010 must not operate between Edwin and Ione on Ione Branch unless authorized by Superintendent. If movement authorized, speed of 15 MPH must not be exceeded.		
Nos. 7014 and 7025 must not operate on any branch except Schellville Branch; Calistoga Branch between Napa Jct. and Napa River bridge 69.62 at Napa; and on Vallejo Branch between Napa Jct. and MP 68.40.		
Locomotive cranes:		
With boom disconnected, heavy end forward, except SPMW-4020, 743 and 2575.	45 35*	25* 25*
With boom disconnected, light end forward	20*	15
With boom in place, either end forward	25*	15
Rotary snow plows:		
Steam	25	15
Electrified	35	15

*These speeds must not be exceeded, and on curves where authorized speed is more than 15 MPH speed must be reduced to 5 MPH less than shown in timetable and on speed signs.

OTHER MAXIMUM SPEEDS	MPH PASSENGER TRAINS	MPH FREIGHT AND MIXED TRAINS
Trains of deadhead equipment, with caboose	65	..
Passenger trains, with caboose	65	..
Engine and caboose only, except:	..	65
must not exceed speed for same engine running forward light.		
Logs loaded on flat or logging cars, except:	35	..
On curves	25	..
Through truss bridges, tunnels and passing stations	15	
Engine, flanger and caboose only, except:	..	40
On curves	..	30

SPMW cars equipped with K type brakes must not be handled in trains consisting of more than 50 cars and train must not exceed 40 MPH while handling such equipment.

All cars handled in passenger trains must be equipped with steel-tired or all-steel wheels. Cars not so equipped must move in freight trains, passengers if any, to move on passenger trains.

Passenger carrying cars, baggage, express and other head-end cars, unless equipped with steel center sills and steel platforms must not be handled in passenger trains except on authority of Superintendent.

Freight cars must not be handled behind occupied passenger carrying cars, except in mixed trains in military or naval movements.

Baggage, express, mail, refrigerator or other head-end cars must not be handled on rear of passenger trains unless trainmen can pass through them, except between West Oakland and Pittsburg.

When moving against current of traffic, or when movement is not protected by block signals, speed of passenger trains and light engines must not exceed 59 MPH, and speed of freight trains must not exceed 49 MPH, nor may speed exceed that applying to normal operation. Unless proceed signal received, or it is known that warning devices are operating, such trains and engines must stop approaching road crossings where automatic warning devices are installed, and may proceed after member of crew protects crossing.

RULE 5. Time of arrival Tracy for first class trains from Lathrop subdivision will apply at Signal 721. Trains must not pass this point ahead of designated time.

RULE 14(l). Whistle signal must be sounded and bell kept ringing when entering or leaving the Sugar Co.'s yard at Alvarado or approaching their road crossing.

RULE 14(m). Whistle will not be sounded one mile before reaching stations between:

West Oakland and Elmhurst.

RULE 16(e). Oakland: Rule 16(e) is CANCELLED.

RULE 16(k). Oakland: When standing, apply or release air brakes.

RULE 26. West Oakland (Passenger Yard): Blue signs reading "Men at Work" permanently installed on base of indicator lights at each end of Tracks 2 to 6, inclusive, and at east end of stub Tracks 13 to 19, inclusive. When indicator lights display blue aspect, these tracks must not be entered nor cars or cut of cars moved or coupled to nor other equipment placed so as to obstruct the view of signs or lights. When indicator lights display yellow aspect, blue sign reading "Men at Work" will not apply to these tracks.

Electric switch locks installed on west switches Tracks 2 to 5, inclusive, and on east switches Tracks 14 to 19, inclusive.

Power operated derails installed on west end Track 6 and on east end Tracks 2 to 6, inclusive, and Track 13.

RULE 82-A. Trains receiving Western Division clearance at San Jose may leave Santa Clara without clearance.

No. 90 from Western Division may assume corresponding schedule at Santa Clara without clearance.

Third-class trains and sections thereof authorized on Western Division from Redwood Jct. may display indicators and signals, if any, as such schedule or section on Coast Division, San Francisco or Bayshore to Redwood Jct., although movement is authorized under the provisions of Rules D-97-A and D-251.

RULE 83. Identification may be made by eastward trains between Magnolia Tower and Elmhurst to be applied at end of double track. Reduce speed sufficiently to permit identification and comply with Rule 14(k).

Identification may be made by eastward trains between Redwood Jct. and Belle Haven to be applied at end of double track. Reduce speed sufficiently to permit identification and comply with Rule 14(k).

Train register check of superior trains obtained at West Oakland may be applied at end of double track, Elmhurst, outside of D-251 limits between Sacramento and West Oakland and end of double track Martinez on Tracy line provided superior trains moving in the same direction are not passed in interlocking limits or territory where Rule D-251 is applicable.

Identification of trains may be made by westward trains between Fresno and junction switch. Reduce speed sufficiently to permit identification and comply with Rule 14(k).

RULE 83-A. Trains originating or terminating will register at Los Banos, Ingle and Fresno Yard.

At the following stations only trains indicated will register:

West Oakland	Trains originating or terminating
Newark	
Niles	
Livermore	

Extra trains will register at Niles Tower.

Trains originating or terminating San Jose Yard will register at Santa Clara.

RULE 83-B. At open train-order offices trains may register by ticket as follows:

Niles Tower	All trains.
Redwood Jct.	All trains.
Santa Clara	All trains.
Tracy	Nos. 57-58

RULE 93. Yard limits in which the provisions of Rule 93 will apply, are established at the following points:

West MP		East MP
	Oakland (Martinez line)	17.35
	" (Niles line)	15.82
	" (Alvarado line)	14.01
14.02	Mulford	18.00
15.83	Hayward	21.69
24.00	Alvarado	26.00
78.50	Tracy (Martinez-Los Banos line)	85.64
66.50	" (Niles-Lathrop line)	74.37
24.44	Redwood Jct. (San Mateo-Newark line)	28.20
	" (Palo Alto line)	27.17
35.20	Newark (Centerville-Redwood Jct. line)	40.50
28.79	" (Alvarado-Santa Clara line)	34.50
40.51	Niles (Tracy-Redwood Jct. line)	30.67
26.60	" (Hayward-Milpitas line)	30.95
41.70	East Pleasanton	45.89
63.25	" (San Ramon line)	
45.89	Livermore-Ulmar	51.20
54.03	Altamont	55.64
32.00	Milpitas	42.50
43.47	San Jose (Palo Alto-Coyote line)	56.00
43.55	" (Milpitas line)	
43.74	" (Alviso line)	
99.10	Westley	101.10
105.85	Patterson	108.62
112.00	Crows Landing	114.50
117.95	Newman	121.04
122.50	Gustine	124.60
139.61	Los Banos	142.01
152.20	Dos Palos	155.00
164.94	Firebaugh-Mendota	178.50
181.10	Ingle (Los Banos-Fresno line)	182.20
181.97	" (Riverdale Branch)	End of track
192.46	Kerman	194.53
206.04	Fresno (Pratton-Tulare line)	210.79
199.07	" (Merced-Clovis line)	209.60

Second and inferior class trains, extra trains and engines are not required to clear or protect against first-class trains within yard limits where Rule D-251 is applicable.

Oakland: Yardmen must use green flag by day and green light by night when signaling trains to enter or leave yard tracks.

Niles: Unless otherwise instructed, eastward trains operating via Decoto enroute to Livermore line at Niles Junction, must take siding at Niles.

Fresno Yard: When Signal 2046 on Pratton line, or Signal 2042 on eastward track displays stop indication train must stop, and after proceed signal received from yardman (green flag by day, green light by night) may then proceed as prescribed by Rules 509 and 513.

Eastward trains via Pratton line to Fresno Yard must receive proceed signal from yardman (green flag by day, green light by night) before fouling eastward or westward main track.

Eastward trains via Pratton line to Fresno Yard may pass Signal 2068 on Pratton line displaying stop indication without stopping to enter west leg of wye if wye switch is properly set and proceed signal received from yardman will confer authority for movement to fouling point of Tulare line eastward track only.

Trains from Fresno yard to operate via Pratton line may pass Signal 2036 displaying stop indication without stopping at restricted speed to enter west leg of wye if wye switch is properly set and proceed signal received from yardman.

Trains entering or leaving yard tracks must receive proceed signal from yardman (green flag by day, green light by night), except within limits of diverging route signals.

RULE 95. Sections of schedules authorized on Western Division to or from Santa Clara will apply over Coast Division into or out of San Jose.

RULE D-97-A. Will apply as follows: Between West Oakland and Elmhurst; Redwood Jct. and Belle Haven.

RULE 103-A. Automatic crossing gates:

Following crossings protected by gates, with control circuits located within short distance of crossings.

Crews of trains or engines making stop, reverse movements, movements against the current of traffic or movements from yard tracks over crossings, must know that gates are down and crossings clear of vehicular traffic before entering crossings.

Station	Location	MP
Magnolia Tower	Adeline St.	5.9
Oakland	5th Ave.	7.6
Oakland	High St.	10.4
Oakland	50th Ave.	10.8
Oakland	66th Ave.	11.7
Oakland	77th Ave.	12.2
Oakland	77th Ave. (drill)	12.3
Oakland	85th Ave.	12.6
Elmhurst	98th Ave.	13.3

Oakland: When moving against current of traffic flagman must protect crossing before movement is made over Grove, Broadway, Franklin and Webster Streets and 29th Avenue.

Public Utilities Commission orders prohibit operation of train, engine, motor or car over the following crossings unless first brought to a stop and traffic on the highway protected by a member of the crew.

Oakland-Market St.	Pacific Pool Warehouse No. 7,
Mulford	Crossing Maitland Drive on Airport drill, L-16.5-C,
Vernalis	Crossing on Associated Dehydrators spur, BA-93.0,
Los Banos	Crossing 2nd and 4th Sts., on drill crossovers and storage tracks, BA-140.1, BA-140.2,
Firebaugh	Crossing 12th and 13th Sts., on drill and spur tracks, BA-166.2, BS-166.4-C,
Cromir	Crossing Shaw Ave. on team track, BA-170.2,
Helm	County road crossing on Holly Sugar Co. track, BAO-199.1.

RULE 104. The normal position of rigid switches at the end of double track and at junctions, is as follows:

Ingle.........Riverdale Branch, for siding.
Fresno Yard. End double track, for westward track.
Fresno.......Pratton line, for eastward main track.

RULE 105. Hayward: Siding extends from MP 18.74 to MP 19.77.

Newark: Siding on Tracy-Redwood Jct. line is west of Elmhurst-Santa Clara line crossing extending from MP 37.27 to MP 36.19.

Siding on Elmhurst-Santa Clara line is east of Tracy-Redwood Jct. line crossing extending from MP 31.00 to MP 32.22.

East Pleasanton: Siding is first track north of main track extending from MP 42.91 to MP 44.02.

RULE 221. West Oakland is a train-order office only for trains originating.

Light type train order signal, not equipped with semaphore arms, installed on the west side of the Fruitvale Tower Building.

Mulford, Niles and East Pleasanton are train-order offices only for trains originating when operator is on duty.

Warm Springs is train order office for originating or terminating trains only.

Eastward trains to Coast Division, may leave Santa Clara without clearance.

Trains from Western Division must obtain clearance before leaving Redwood Jct.

Fresno Yard is a train-order office only for trains originating.

Fresno is train-order office only between 11:00 P.M. and 8:00 A.M. daily.

RULE D-251. Will apply as follows: Between West Oakland and Elmhurst.

RULE 291-A. Flashing yellow lamp unit on mast of eastward interlocking signal on Coach Yard lead is displayed in both eastward and westward directions. Illumination of this flashing light observed from either direction will authorize an eastward reverse move toward 16th St. or Bays following a westward move into Coach Yard which does not clear the interlocking plant.

RULE 306. Following block signals equipped with a trangular plate displaying the letter "P", have included in their control limits some special protective device:

Eastward Signals	Protection	Westward Signals
P-SA Elmhurst		
	Spring switch to Stonehurst Line	Elmhurst P-SA Niles Line
	Spring switch, end of double track	Elmhurst P-SA Santa Clara Line
	Spring switch, Shinn	P-423
	Spring switch, end double track, Redwood Jct.	P-285
P-290	Spring switch, Niles	
	Spring switch, Milpitas wye, San Jose	P-I
P-710	Spring switch, junction to Los Banos Line, Tracy	
	Spring switch to yard, Tracy	P-829
P-1164	Flood detector at MP 116.60, Timba	P-1179
P-1372	Flood detector, MP 137.80 Volta	P-1387

RULE 505. AUTOMATIC BLOCK SIGNAL SYSTEM

Niles: Signal 291 governs movements, through junction switch, from Tracy line. Signal 293 governs movements, through junction switch, from San Jose line.

Top unit of Signal P-290 governs movements to Tracy line and lower unit governs movements to San Jose line.

Tracy: Top unit of Signal P-710 governs movements toward Lathrop. Bottom unit governs movement toward Los Banos.

Signals 713, 825 and 827 are approach clearing. Signal 713 will revert to stop position when 600-ft. track circuit in front of station building is occupied for approximately four minutes. A second approach circuit is located 185 feet east of McArthur Blvd. to clear Signal 713 for movements to continue.

Approach circuit to Signal 825 on Track No. 1 begins 185 feet east of MacArthur Blvd.

Approach circuit sign is north of main track 185 feet east of MacArthur Blvd.

Top unit of Signal P-829 governs movements on main track. Bottom unit governs movements to yard.

Signals 716 and 723 on Track No. 1 at crossovers near MP 72 govern movements over crossovers to enter main track only. These signals will not be lighted when crossovers are lined normal. Time circuits are provided to cut out west control of Signal 716, 2 minutes and 40 seconds after crossover is lined; east control of Signal 723, 6 minutes and 10 seconds after crossover is lined; and west control of Signal 736, 5 minutes and 20 seconds after crossover is lined. If signals fail to clear at expiration of time interval, Rules 509 and 510 will govern.

Top unit of Signal 735 governs movements on main track. Bottom unit governs movements into yard over crossover.

Top unit of Signal 736 on Track No. 1 governs movements to the freight lead. The center unit governs movements to the main track, over the crossover. The bottom unit, when displaying a lunar light governs movements to the Freight Lead per Rule 289.

PUSH BUTTONS. Tracy:

Push buttons are located on Signal 827 on Los Banos line, and instrument case east of MacArthur Blvd. on Lathrop line to clear signals over junction switch.

Push buttons are located on instrument case opposite Signals 828 and 826, Los Banos line, west of spring switch to yard.

RULE 516. Overlap posts:

Hayward (1200 feet west of Signal 199) . . Westward trains.

RULE 535. SPRING SWITCHES

Spring switches equipped with facing point locks are located as follows:

Location		Normal Position
Redwood Jct.	End double track	Westward track
Tracy	Junction switch MP-71.16 to Los Banos line	Lathrop subdivision

Spring switches not equipped with facing point locks are located as follows:

Location		Normal Position
West Oakland	1st and 16th line	16th St. line
Elmhurst	Westward Track to Stonehurst Line	Stonehurst Line
Elmhurst	End of Double Track	Westward Track
Shinn	East end siding	Main track
Niles	Junction switch west of station	San Jose line
San Jose	Milpitas wye switch	Milpitas line main track
Tracy	MP-82.98 Los Banos Main to yard	Yard Track

RULE 605. INTERLOCKING

On double track within Oakland yard limits signal operator may arrange to move trains from one tower to another against the current of traffic, after having an understanding by telephone for each movement. Before moving trains against current of traffic signal operator must know that track to be used is clear of opposing engines and trains.

West Oakland (First and Cedar Sts.): Limits extend from signals at Cedar Street on Niles line to signals 427 feet east of MP 5 on Martinez line.

Eastward signals on First Street lead 227 feet west of First Street freight lead crossing, eastward signal on washer track 144 feet west of freight lead, eastward signals on 16th Street lead at clear point, 187 feet west of freight lead switch, westward signals on diesel tracks, coach lead and yard leads 40, 50 and 60.

Telephones to 16th Street Tower and West Oakland Tower are located at signal locations west of 16th Street Tower.

An eastward light type interlocking signal installed on Track 2, 100 feet west of the 1st Street Freight Lead crossing.

A flashing yellow lamp unit installed on the mast of the eastward interlocking signal on the Coach Yard lead track and will be displayed in both eastward and westward directions. Illumination of this flashing yellow light observed from either direction will authorize an eastward reverse move toward 16th Street or Bays following a westward move into the Coach Yard which does not clear the interlocking plant.

Trains and engines moving out westward limits, West Oakland interlocker toward Bays are operating on yard tracks.

Magnolia Tower (First and Chestnut Sts.): Limits extend on eastward main track from signal 1600 feet west of WPRR crossing to dwarf signal 500 feet east of WPRR crossing, and on westward main track from signal 500 feet east of WPRR crossing to dwarf signal 480 feet west of crossing.

When necessary to perform switching within the interlocking limits, signal operator must designate work limits and clock time limit that must not be exceeded and must immediately actuate signal levers to display proceed indication in interlocking signals governing such movements and place red tags on signal levers controlling such movements. The tags must not be removed or attempt made to change position of power operated switches within such limits until yardmaster or member of crew has orally reported switching completed and clear of work limits.

Employe requesting work limits and clock time limit must state his name, occupation, location and train or engine number. Work and clock time limits granted must be repeated to signal operator and if correct, reponse "OK" will be given by signal operator.

Fruitvale: Limits on main track extend from Signal Bridge 123 to Signal Bridge 127 on westward track, and to westward dwarf signal 680 feet west of Signal Bridge 127 on eastward track.

Melrose: Limits extend between interlocking signals on old electric line and on the drill track between interlocking signal on west side of San Leandro Blvd. and interlocking signal on east side of WPRR crossing and is under the control of WPRR train dispatcher.

When signals do not display proceed indication after approach circuit is occupied, a member of crew must contact WPRR train dispatcher by telephone for instructions and permission to operate push button time release.

When necessary to perform switching within the interlocking limits, a member of crew must obtain clock time limit from WPRR train dispatcher and be governed by signal indication. When Klaxon horn is sounded, SP movements must immediately clear interlocking limits.

Cars or engines must not be left on approach circuits located in advance of interlocking signals.

Telephones, push buttons and instructions for operation of push button time release and dual control switches located in boxes on interlocking signal governing eastward movements on old electric line, on side of Instrument House and on instrument case adjacent to crossing of drill track and WPRR track.

Elmhurst: Interlocking limits extend either side of Junction switches between eastward SA signals on eastward and westward tracks and westward SA signal on Stonehurst Line, westward SA signals on Niles and Santa Clara Lines. The Junction switch of Niles Line and Santa Clara Line MP 13.47, is power operated, dual control switch controlled by Signal Operator at Fruitvale.

When necessary to hand throw dual control switch or when extensive switching is to be performed over the power switch permission must be secured from Signal Operator at Fruitvale and Rules 771 and 772 will govern.

Interlocking portion of SA signals controlled by Signal Operator at Fruitvale Tower.

Trains and engines desiring to make an eastward movement from the Westward Track over the crossover, will receive permission from the Signal Operator to hand operate the spring switch. Member of crew, after throwing the switch, will notify Signal Operator the switch is over and points in position before Operator will clear the Signal (4R) for such movements.

When movement is completed switch must be returned to normal position.

Niles Tower: Limits extend from dwarf interlocking signal on Niles line and interlocking signal on Tracy line, 1685 feet west of WPRR crossing to Signal 298 on Milpitas line and to Signal 425 on Centerville line.

Eastward interlocking signal 650 feet west of WPRR crossing governs movements as follows:

Top unit governs movements to Milpitas line.

Lower unit governs movements to Centerville line.

When Signal 420 or Signal 422 display stop indication, train or engine must stop and not proceed until signal displays proceed indication or permission obtained from signal operator.

Junction switches are dual control switches and are under control of signal operator. When necessary to hand throw these switches, permission must be obtained from signal operator and be governed by Rules 771 and 772. Instructions for operation of dual control switch machines are posted in telephone booths.

Derail near east end of yard Track No. 1 at Niles is electrically locked and under control of signal operator at Niles Tower. Instructions for operation by hand when authorized by signal operator are posted inside of lock box.

Whistle signals:
To San Jose, o — —,
To Centerville, — o —,
To Niles, o — o,
To Tracy, — o — o.

Newark: Limits extend from signal 50 feet east of wye switch on Centerville line to signal 1150 feet east of wye switch on Santa Clara line, and to signal 650 feet west of wye switch on Elmhurst line, and to dwarf signals on Redwood Jct. line near Newark station building.

Crossover No. 25 from Santa Clara main track to Santa Clara siding is equipped with dual control switch machines under control of signal operator.

When necessary to hand throw these switches, permission MUST be obtained from the signal operator and be governed by Rules 771 and 772.

Whistle signals:
To Santa Clara, o — —,
To Santa Clara line siding, o — o,
To Santa Clara line siding extension, — o,
To Redwood Jct., — o — o,
To Dumbarton line siding, o — o o,
To Centerville, — o —,
To Elmhurst, o — o.

San Francisco Bay drawbridge, MP 32.53 on Redwood Jct. line:

Tracy: Limits extend from westward SA Signal at MP-70.68 to eastward SA Signal at MP-70.64 on the Niles line and to eastward SA Signal at MP-82.18 on the Martinez line.

Position of the junction switch between Niles Subdivision MP 70.66 and Martinez Subdivision MP 82.16 controlled by yardman from control panel located at the base of the Yardmaster's tower.

The junction switch between Niles Line MP 70.66 and Martinez Line MP 82.16 is equipped with a dual control machine. When necessary to hand throw this switch, permission must be secured from the Yardmaster and Rules 771 and 772 govern.

Interlocking portion of the SA signal will be controlled by Tracy Telegraph Operator.

The telegraph operator shall determine that switch has been lined for proper route before clearing a signal.

RULE 663(b) (Interlocking).

Signal operator at
TRACY
FRUITVALE
NILES
NEWARK
may authorize movements under provisions of this rule after it has been ascertained indication lights on control panel are illuminated indicating dual control switches are in proper position and locked for movement without requiring dual control switches to be placed in hand position as required by Rule 772.

When indication lights on control panel are not illuminated movements may be authorized under provisions of this rule; however, before making a facing point or trailing point movement over dual control switches, such switches must be placed in hand position in accordance with Rule 772 and locked until movement over switch has been completed. When movement has been completed, switch must be returned to normal position and selector lever restored to motor position and locked.

RULE 680. AUTOMATIC INTERLOCKING

East Oakland, WPRR Crossing yard tracks, MP 7.70: Limits extend between interlocking signals in approach to both sides of crossing.

Derails within interlocking limits equipped with electric locks and after locks have been released derails may be operated by hand throwing lever on switch stand located at crossing.

WPRR Crossing (Stonehurst Branch), MP 13.80: Limits extend between interlocking signals in approach to both sides of crossing.

Radum, WPRR crossing MP 67.8 (San Ramon Branch): Limits extend between eastward SA signals just west of WPRR crossing and westward interlocking signals just east of WPRR crossing on both legs of wye track.

Signal clearing circuit located 100 feet in advance of eastward interlocking signal on east leg of wye and when occupied will clear signal for trains completing movement over crossing after signal has changed to stop indication account expiration of four minute time interval.

After signal clearing circuit is occupied if signal does not display proceed indication, a member of crew must actuate time release. (Wait four minutes in inclement weather or other conditions before actuating time release.) After time release is actuated signal does not display proceed indication in six minutes, but red indicator on signal mast is illuminated movement may be made through interlocking. If red indicator light is not illuminated and signal displays stop indication, movement must be made under provisions of Rule 663(c).

Signals governing movement from San Ramon Branch to main track will not display proceed indication until junction switch on main track is lined for movement.

Lyoth: WPRR crossing, MP 85.16. Limits extend from eastward SA Signal 825 feet west of crossing to westward SA Signal 590 feet east of crossing.

Signals are approach clearing, if movement over crossing is not completed within 8 minutes after train enters approach circuit, signals will revert to STOP position.

Approach clearing circuits are provided approximately 1050 feet in advance of eastward SA home signal and 500 feet in advance of westward SA home signal to clear signals for trains desiring to complete movement over crossing after signals have assumed STOP position due to expiration of the 8 minute time interval.

Cars or engines are not to be left standing on these circuits.

Push button time release in box marked "SP" and block indicator marked "WP" are installed near crossing.

Instructions for operating time release are posted in box.

If signals indicates STOP for train desiring to make movement over crossing, a member of crew will proceed to crossing to operate time release. If block indicator marked "WP" indicates block clear, press push button until yellow light appears, then release. Approximately 8 minutes later a red light should appear under the button and signal indicate proceed.

If signal does not display proceed indication after time release has been operated, if red indication light on home signal is displayed, train may proceed through interlocking limits.

If home signal indicates STOP and red indicator light is not displayed, train may proceed over crossing as provided in Rule 663(c).

RULE 705—LETTER TYPE INDICATORS

Indicators located as follows:

Illum. Letter	On Signal	Approaching	Authorizes and Requires Movement as Follows:
W	67	Oakland (First St.)	Freight trains stop, to clear Webster St., (second crossing east of station) and wait until Signal 67 displays proceed indication.
W	Lattice Pole Approx. 20 Ft. west of 23rd Ave.	Fruitvale Tower	Eastward trains except yard engines stop west of 23rd Ave. and wait until indicator is extinguished, unless authorized by Fruitvale Operator to proceed.
W	273	Redwood Jct.	Westward trains via Dumbarton must stop short of Signal 273 and wait until indicator is extinguished.

W......7 ft. mast		
MP 44.20	..Santa Clara	.Eastward trains, except first-class, stop short of Reed St. and wait until indicator is extinguished and flashing white light is displayed. Display of flashing white light authorizes movement to interlocking limits Santa Clara.

Milpitas: An illuminated letter type indicator, dispatcher controlled, in service on separate mast 1390 feet west of the west switch Milpitas, and will display the letter "W". When the letter "W" in this indicator is illuminated, the Signal 400 at the west end of Milpitas will display red aspect and Signal 388, 4940 feet west of the indicator, will display yellow aspect.

Eastward trains observing yellow aspect in Signal 388 will proceed prepared to stop before reaching the indicator and not proceed until the "W" light is extinguished or proceed indication is displayed by Signal 400, unless verbal authority is received from the train dispatcher or his representative.

GENERAL REGULATIONS

RULE 825. Tracy: All freight trains entering Tracy Yard will tie no less than three hand brakes on the east end unless instructed otherwise by Yardmaster.

Train crews must not release hand brakes on outbound trains until engine is coupled and brake pipe is charged.

RULE 827. Tracy: Passenger trains and trains consisting entirely of passenger equipment, except No. 51 and 52, must approach Tracy at speed not exceeding 8 MPH to allow forward brakeman to detrain on station side, where rear of train will stop. He will make rolling inspection of train, then walk length of train on opposite side, making standing inspection, giving careful attention to running gear and journal boxes and entrain on station side.

RULE 830. Milpitas: Westward trains not exceeding 75 cars making pick-up or set-out at Milpitas will stop their train with rear end west of Curtis Way, DA 41.1, crossing.

Westward trains exceeding 75 cars making set-out or meeting eastward trains will stop their train east of Capitol Avenue and wait until eastward train is into clear before proceeding.

Eastward trains having set-out or pick-up at Milpitas will leave their train west of the Battery Box located 400 feet west of the State Highway crossing at MP 40.0 while making set-out or pick-up.

Eastward trains must not exceed 75 cars after set-out or pick-up is made when meeting an opposing train exceeding 75 cars.

Los Banos: Westward freight trains making pick-up or set-out, must stop to clear Place Road which is first crossing east of Main Highway crossing (MP 141.3) east of Los Banos. Eastward freight trains stopping to pick up or set out cars, will leave train west of Second Street crossing.

Dos Palos: Trains picking up, setting out, or performing station switching at Dos Palos must not block road crossing BA 153.1, east of station building.

Westward trains must leave train east of this crossing while performing work.

AIR BRAKE RULES

RULE 2. Enginemen taking charge of engines for freight and passenger service at West Oakland diesel shop and Tracy will consider that condensation has been drained from reservoirs, and from moisture and dirt collectors; that sanders are operating properly; that there are no flat spots on wheels.

RULE 17. Retaining valves must be used on freight and mixed trains as follows:

With less than two dynamic brakes in operation, trains consisting of more than 20 cars which average over 75 tons per operative brake must use 10 retaining valves on head end of train on descending grade from Altamont to Midway, or more if requested by engineer.

FREIGHT TRAINS

RULE 22. Tracy: Trainmen must not couple air hose on outgoing trains at Tracy until train is made up and caboose and road engine are on train. Coupling caboose and road engine to train will be considered as an indication that the train is made up and switchmen have completed their work. Switchmen must not perform switching on or couple other cars to a train on which the caboose and road engine have been attached without instructions from the yardmaster, who will see to it that members of the crew are notified in advance.

PASSENGER TRAINS

RULE 39. Running test must be made as follows: Eastward and westward trains at Altamont.

MISCELLANEOUS

Look out for impaired clearance and bad footing from MP 39 to MP 39.80, Alviso, account levee constructed to hold back high tides.

Trains 51, 52, 53 and 54 will make station stop at Tracy Station (Lathrop Line), clearing Mac Arthur Boulevard.

Trains 57 and 58 will make station stop at Tracy Station (Los Banos Line).

11. Load limit (car and contents):

Redwood Jct.-Tracy	263,000 pounds
Oakland-San Jose via Niles	263,000 pounds
Elmhurst-Santa Clara	263,000 pounds
Tracy-Fresno	263,000 pounds
Ingle-Riverdale	240,000 pounds

Unless authorized by Superintendent, heavier loads must not be handled.

13. LOCATION OF STOCK YARDS

Station	Capacity in cars
Milpitas	10 (Water)
Newark	5 (Water)
Livermore	12 (Water)
Ingomar	16
Los Banos	23 (Water)
Mendota	20 (Water)
Helm	10 (Water)

30.

LOCATION OF OVERHEAD AND SIDE STRUCTURES NOT STANDARD CLEARANCE ON MAIN TRACK AND SIDINGS

Mile Post	Location	Description
28.9	Henderson	Highway underpass............Side
32.5	Dumbarton	San Francisco Bay drawbridge .....Side
34.5	Dumbarton	Newark Slough drawbridge........Side
42.9	Niles Jct.	Highway underpass............Side
30.8	Dresser	Alameda Creek bridge...........Side
31.5	Farwell	Alameda Creek bridge...........Side
38.3	Pleasanton	WPRR overhead bridge.......Overhead
55.4	Altamont	Highway overhead bridge ....Overhead and side
57.9	Altamont	Tunnel..........................Side
18.2	San Lorenzo	San Lorenzo Creek bridge...........Overhead and side
24.2	Decoto	WPRR overhead bridge.......Overhead
29.4	Niles	Highway underpass............Side
36.2	Drawbridge	Warm Springs Slough bridge.......Side
29.4	Niles Tower	Street underpass.................Side
140.2	Los Banos	Warehouse on back track opposite leg of wye............Side

SPECIAL INSTRUCTIONS—NILES SUBDIVISION

SPEED RESTRICTIONS FOR TRAINS: Maximum speed of trains in territory shown below is subject to further restrictions applicable to engines in the train as shown in SPEED RESTRICTIONS FOR ENGINES appearing on page 5 and MAXIMUM SPEED PERMITTED WITH CERTAIN EQUIPMENT, and OTHER MAXIMUM SPEEDS appearing on page 6 of Special Instructions for All Subdivisions. Speed must be further reduced as prescribed by speed signs, except as specifically authorized by Special Instructions herein, or by timetable bulletin.

All trains must run carefully during and after heavy storms, particularly when the track is apt to be affected. When fog, storms or other conditions obscure track or signals, speed of trains must be so reduced as to permit strict observance of signals and INSURE SAFETY REGARDLESS OF TIME.

TERRITORY MP MP Column:	PASSENGER TRAINS 1	FREIGHT AND MIXED 2	LIGHT ENGINES 3
EASTWARD, REDWOOD JUNCTION TO TRACY:			
26.23 to 26.25 (jct. switch)	20	20	20
26.25 to 28.35	35	35	35
28.35 to 28.41 (end double track)	25	25	25
28.41 to 31.51	60	60	60
31.51 to 33.00 (bridge)	30	30	30
33.00 to 37.00	60	60	60
37.00 to 37.51 (Newark)	15	15	15
37.51 to 42.23	50	50	50
42.23 to 42.40	15	15	15
★★42.40 to 42.78	15	15	15
42.78 to 43.00 (29.60) (Niles Jct.)	15	15	15
29.60 to 37.10	25	25	25
37.10 to 40.57	35	35	35
★40.57 to 41.43 (Pleasanton)	25	25	25
41.43 to 46.66	45	45	45
★46.66 to 47.48 (Livermore)	30	30	30
47.48 to 52.00	50	50	50
52.00 to 63.00	25	25	25
63.00 to 70.66	50	50	50
70.66 to 71.16 (jct. Los Banos)	35	35	35
NILES TO SAN JOSE YARD:			
29.00 to 29.43	15	15	15
★★29.43 to 29.81	15	15	15
29.81 to 45.17	60	60	60
45.17 to 47.39	15	15	15
WEST OAKLAND TO SANTA CLARA:			
4.40 to 5.00	15	15	15
5.00 to 5.93	30	30	30
5.93 to 5.94 (WP crossing)	20	20	20
5.94 to 6.20	30	30	30
★6.20 to 7.20 (Market to Oak St.)	15	15	15
7.20 to 10.50	30	30	30
10.50 to 13.43	40	40	40
13.43 to 13.50 (jct. switch and crossover)	15	15	15
13.50 to 13.70	30	30	30
13.70 to 28.79	60	60	60
28.79 to 31.00 (Newark)	35	35	35
31.00 to 39.00	60	60	60
39.00 to 40.10	40	40	40
40.10 to 43.73	60	60	60
43.73 to 44.48	40	35	40
44.48 to 44.59	15	15	15

TERRITORY MP MP Column:	PASSENGER TRAINS 1	FREIGHT AND MIXED 2	LIGHT ENGINES 3
WESTWARD, TRACY TO REDWOOD JUNCTION:			
71.16 to 70.66 (jct. Los Banos line)	35	35	35
70.66 to 63.00	50	50	50
63.00 to 52.00	25	25	25
52.00 to 47.48	50	50	50
★47.48 to 46.66 (Livermore)	30	30	30
46.66 to 41.43	45	45	45
★41.43 to 40.57 (Pleasanton)	25	25	25
40.57 to 37.10	35	35	35
37.10 to 29.60 (43.00) Niles Jct.	25	25	25
43.00 to 42.78	15	15	15
★★42.78 to 42.40	15	15	15
42.40 to 42.23	15	15	15
42.23 to 37.51, except:	50	50	50
over spring switch east end Shinn	35	35	35
37.51 to 37.00	15	15	15
37.00 to 33.00	60	60	60
33.00 to 31.51 (bridge)	30	30	30
31.51 to 28.41	60	60	60
28.41 to 26.25	35	35	35
26.25 to 26.23 (jct. switch)	20	20	20
SAN JOSE YARD TO NILES:			
47.39 to 45.17	15	15	15
45.17 to 29.81	60	60	60
★★29.81 to 29.43	15	15	15
29.43 to 29.00	15	15	15
SANTA CLARA TO WEST OAKLAND:			
44.59 to 44.48	15	15	15
44.48 to 43.73	40	35	40
43.73 to 40.10	60	60	60
40.10 to 39.00	40	40	40
39.00 to 31.00	60	60	60
31.00 to 28.79	35	35	35
28.79 to 13.70	60	60	60
13.70 to 13.50	30	30	30
13.50 to 13.43 (jct. switch)	15	15	15
13.43 to 10.50	40	40	40
10.50 to 7.20	30	30	30
★7.20 to 6.20 (Oak St. to Market St.)	15	15	15
6.20 to 5.94	30	30	30
5.94 to 5.93 (WP crossing)	20	20	20
5.93 to 5.00	30	30	30
5.00 to 4.40	15	15	15

Trains must not exceed 20 MPH when passing trains being serviced between Cedar and Kirkham Sts., Oakland.

★Regulated by City ordinance. ★★ICC Regulation.

Freight and mixed trains containing no restricted cars are authorized to operate at Column 1 speeds not exceeding 60 MPH (65 MPH when specifically authorized) consistent with local restrictions account grade and other conditions, provided trains:

1. Do not exceed 120 cars and 40 tons per operative brake; or,
2. When carrying 90 lbs. brake pipe pressure, do not exceed:

Number of Cars	Tons Per Operative Brake
70	60
75	59
80	58
85	57
90	56
95	55
100	54
105	53
110	52
115	51
120	50

SPEED RESTRICTIONS FOR OTHER THAN MAIN TRACKS.......... See Page 13

SPECIAL INSTRUCTIONS—NILES SUBDIVISION

SPEED RESTRICTIONS FOR TRAINS: Maximum speed of trains in territory shown below is subject to further restrictions applicable to engines in the train as shown in SPEED RESTRICTIONS FOR ENGINES appearing on page 5 and MAXIMUM SPEED PERMITTED WITH CERTAIN EQUIPMENT, and OTHER MAXIMUM SPEEDS appearing on page 6 of Special Instructions for All Subdivisions. Speed must be further reduced as prescribed by speed signs, except as specifically authorized by Special Instructions herein, or by timetable bulletin.

All trains must run carefully during and after heavy storms, particularly when the track is apt to be affected. When fog, storms or other conditions obscure track or signals, speed of trains must be so reduced as to permit strict observance of signals and INSURE SAFETY, REGARDLESS OF TIME.

TERRITORY	PASSENGER TRAINS	FREIGHT AND MIXED	LIGHT ENGINES
MP MP Column:	1	2	3
EASTWARD, AGAINST CURRENT OF TRAFFIC:			
West Oakland to Elmhurst, except: (subject to lesser speeds on westward track)	40	40	40
★★5.65 to 6.05	20	20	20
★★9.55 to 10.13	20	20	20
ELMHURST TO NILES JUNCTION:			
13.43 to 13.50 (jct. switch)	15	15	15
13.50 to 29.00	50	50	50
29.00 to 29.60	25	25	25
EASTWARD, TRACY TO FRESNO:			
82.58 to 83.00 (jct. switch)	15	15	15
83.00 to 139.75	70	60	70
139.75 to 140.10	70	55	70
140.10 to 141.30	35	35	35
141.30 to 166.39	70	60	70
166.39 to 166.68	60	60	60
166.68 to 206.12	70	60	70
206.12 to 206.87	70	45	70
206.87 to 207.36 (jct. switch)	15	15	15
★207.36 to 208.40	20	20	20
INGLE TO RIVERDALE			
181.97 to 215.00	..	35	35

TERRITORY	PASSENGER TRAINS	FREIGHT AND MIXED	LIGHT ENGINES
MP MP Column:	1	2	3
WESTWARD, AGAINST CURRENT OF TRAFFIC:			
Elmhurst to West Oakland (subject to lesser speeds on eastward track), except:	40	40	40
★★10.13 to 9.53	20	20	20
★★ 6.05 to 5.65	20	20	20
NILES JUNCTION TO ELMHURST:			
29.60 to 29.00	25	25	25
29.00 to 13.50	50	50	50
Thru Jct. Switch MP 13.43	15	15	15
WESTWARD, FRESNO TO TRACY:			
★208.40 to 207.36	20	20	20
207.36 to 206.87 (jct. switch)	15	15	15
206.87 to 166.68	70	60	70
166.68 to 166.39	60	60	60
166.39 to 142.05	70	60	70
142.05 to 141.30	70	55	70
141.30 to 140.10	35	35	35
140.10 to 83.00 (WPRR. crossing)	70	60	70
83.00 to 82.58 (jct. Niles line)	15	15	15
RIVERDALE TO INGLE:			
215.00 to 181.97	..	35	35

★Regulated by City ordinance. ★★ICC Regulation.

Do not exceed 15 MPH on main track between east (192.17) and west (191.74) house track switches at San Joaquin.

Freight and mixed trains containing no restricted cars are authorized to operate at Column 1 speeds not exceeding 60 MPH (65 MPH when specifically authorized) consistent with local restrictions account grade and other conditions, provided trains:

1. Do not exceed 120 cars and 40 tons per operative brake; or,
2. When carrying 90 lbs. brake pipe pressure, do not exceed:

Number of Cars	Tons Per Operative Brake
70	60
75	59
80	58
85	57
90	56
95	55
100	54
105	53
110	52
115	51
120	50

On Riverdale Branch maximum speed of trains as shown below must not be exceeded when handled by following engines, subject to further restrictions shown in Speed Restrictions for Trains table above.

DF 12, 15, 608, 609, 619........................30 MPH

SPEED RESTRICTIONS FOR OTHER THAN MAIN TRACKS	With Caution Not Exceeding MPH
Through sidings, yard and other tracks, wyes, balloon tracks, crossovers and turnouts, except:	15
Through slip switches	10
Through turnouts on other than sidings	10
On branches	10
Ravenswood, on spur	10

SPECIAL INSTRUCTIONS—NILES SUBDIVISION

RATING OF ENGINES—In Units of 2000 Lbs. (Tons)

NOMINAL CLASS	ENGINE NUMBERS	Oakland and Santa Clara	Oakland and San Jose Yard via Niles	Niles and Redwood Jct.	Tracy to Altamont	Livermore to Altamont	Niles to Livermore	Altamont to Niles Altamont to Tracy	Tracy and Fresno	Ingle and Riverdale
DP-4, 7, 12	6000 to 6004, 6017, 6018, 6046 to 6054, 5900 to 5909, 5916, 5917	3400	2650	3725	....	....	....	....	3400	...
DP-5, 6, 8 to 11	6005 to 6016, 6055 to 6064, 5910 to 5915 6019 to 6095, 5918 to 5924	3375	2625	3700	1100	....	1400	5525	3425	...
DP-13	6067 to 6068	3225	2525	....	....	....	....	....	....	...
DF-1 to 12	6138 to 6470, 8022 to 8305, except	3750	2950	4100	1275	1350	1600	6050	3750	3000
	with 61:16 gear ratio	....	....	....	....	....	....	....	....	...
	with 60:17 gear ratio	....	....	....	....	....	....	....	3000	...
DF-100	5200 to 5202	....	....	....	....	....	....	....	....	...
DF-101 to 108, 110, 112	4900 to 4902, 5203 to 5248, 5253 to 5278	5000	4075	5000	1675	1775	2150	5000	5000	5000
DF-109, 111	4903 to 4905, 5252	5000	5000	5000	2550	2575	3050	5000	5000	...
DF-114, 116 to 118, 120 to 122, 124, 125	5279 to 5293, 5308 to 5335, 5339 to 5444, 5449 to 5493	6100	4800	6750	2050	2175	2575	10000	6500	...
DF-123, 126	5448, 5494 to 5507	6225	4850	6850	2050	2200	2575	10000	....	...
DF-127	7000 to 7020	....	....	....	....	....	....	....	7700	...
DF-500, 501	4800 to 4815	7400	5775	8000	2425	2575	3050	8000	....	...
DF-502	4816 to 4818	....	....	....	....	....	....	....	5900	...
DF-602, 603, 605 to 607, 611, 612, 616	5600 to 5719, 5730 to 5844, 5872 to 5895	3950	3130	4360	1350	1425	1690	10000	3950	...
DF-608 to 610, 613, 614, 615	5720 to 5729, 5845 to 5871	4100	3250	4500	1400	1475	1750	10000	4050	...
DF-800	9000 to 9002	7625	7625	8450	2500	2650	3150	10000	7625	...
DS-1 to 8	1000 to 1032	1625	1275	1775	520	550	660	4000	1625	1175
DS-9 to 12	1033 to 1090	....	....	....	....	....	....	....	....	2475
DS-100 to 109, 111, 115, 119	1300 to 1441, 1464 to 1485, 1514 to 1528, 1551 to 1567	2450	1925	2700	800	550	1025	4000	2450	1775
DS-110, 114, 118	1442 to 1463, 1492 to 1513, 1539 to 1550	3200	2675	3575	1025	1175	1400	4000	3200	2525
DS-113, 117, 120 to 122	1486 to 1491, 1529 to 1538, 1568 to 1596	....	....	....	....	....	....	....	....	...
DS-200, 201	1900 to 1903	....	....	....	....	....	....	....	....	925
DS-500 to 506	5100 to 5120	2000	1575	2200	625	....	850	3000	2000	1625
DS-600 to 604	4600 to 4623, 4700 to 4703	3250	2500	3500	....	1110	1325	4000	3250	...
DS-605, 606	4624 to 4633	3600	2800	4000	1125	1200	1475	4000	3600	...
DS 607	4634 to 4645	....	....	....	....	....	....	....	....	...

UNLESS AUTHORIZED BY SUPERINTENDENT, ENGINES WILL NOT BE PERMITTED TO OPERATE IN THOSE TERRITORIES WHERE NO RATING IS SHOWN IN ENGINE RATING TABLE.

RULE 5. Time of arrival Tracy for first class trains from Lathrop subdivision will apply at Signal 721. Trains must not pass this point ahead of designated time.

Time at stations between Oakland (16th Street) and Sacramento applies at station sign. Except time for eastward first class trains at Davis via Gerber line applies at east switch north siding.

Time for No. 378 at Sacramento applies at east end Sacramento River bridge MP 88.71.

RULE 14(l). Whistle must be sounded on westward trains immediately on emerging from Tunnel No. 1 at Oleum.

RULE 14(m). Whistle will not be sounded one mile before reaching stations between Oakland 16th Street and San Pablo.

RULE 16(e). Oakland: Rule 16(e) is CANCELLED.

RULE 16(k). Oakland: When standing, apply or release air brakes.

RULE 21-C. Engines to handle trains from Desert Unit West Oakland, may display indicators before leaving West Oakland. Indicators of engines on trains arriving Desert Unit West Oakland, may be displayed until engine reaches West Oakland and must be removed immediately on arrival at delivery track.

RULE 26. West Oakland (Passenger Yard): Blue signs reading "Men at Work" permanently installed on base of indicator lights at each end of Tracks 2 to 6, inclusive, and at east end of stub Tracks 13 to 19, inclusive. When indicator lights display blue aspect, these tracks must not be entered nor cars or cut of cars moved or coupled to nor other equipment placed so as to obstruct the views of signs or lights. When indicator lights display yellow aspect, blue sign reading "Men at Work" will not apply to these tracks.

Electric switch locks installed on west switches Tracks 2 to 5, inclusive, and on east switches Tracks 14 to 19, inclusive.

Power operated derails installed on west end Track 6 and on east end Tracks 2 to 6, inclusive, and Track 13.

RULE 30. Between the hours of 9:00 PM and 6:00 AM engine bell must not be rung, except in emergency, in city limits of Napa.

RULE 82-A. Trains terminating at Bays will register at West Oakland.

Trains originating Desert Unit, West Oakland will obtain train orders and clearance at West Oakland.

Trains to Western Division at Sacramento originating at Antelope must obtain two clearances, one endorsed Sacramento Division, the other endorsed Western Division. Train orders addressed to such trains at Antelope will apply the same as if addressed to them at Sacramento and may leave Sacramento without clearance.

No. 378 and extra trains, except trains of passenger equipment, from Western Division passing Sacramento will not obtain clearance at Sacramento.

Sacramento Northern trains originating at Sacramento 19th & B Streets, or Sacramento-Yolo Port District connection to Western Division will not obtain clearance at Sacramento.

RULE 83. Identification of westward first-class trains between Bahia and Suisun-Fairfield may be made by eastward trains enroute Schellville Branch to be applied at Suisun-Fairfield for crossover movements. Reduce speed sufficiently to permit identification and comply with Rule 14(k).

Train register check of superior trains obtained at West Oakland may be applied at end of double track, Elmhurst, outside of D-251 limits between Sacramento and West Oakland and end of double track Martinez on Tracy line provided superior trains moving in the same direction are not passed in interlocking limits or territory where Rule D-251 is applicable.

RULE 83-A. At the following stations only trains indicated will register:

West Oakland.................
Suisun-Fairfield.............
Davis.........................
Avon..........................
Port Chicago..................
Pittsburg.....................
} Trains originating or terminating

Sacramento: Trains originating or terminating, except No. 378 and extra trains passing Sacramento to or from Western Division.

Extra trains will register at Lombard.

RULE 83-B. At open train-order offices trains may register by ticket as follows:

Suisun-Fairfield..All trains from Sacramento line to Schellville Branch.
All trains from Schellville Branch to Sacramento line.
Davis..........All trains to or from West Valley Subdivision, Sacramento Division.
All Sacramento Northern Trains.
Lombard........All trains from Schellville to Suisun-Fairfield.
All trains from Suisun-Fairfield to Schellville.
Tracy.......................................Nos. 57-58

RULE 93. Second and inferior class trains, extra trains and engines are not required to clear or protect against first-class trains within yard limits where Rule D-251 is applicable.

Yard limits in which the provisions of Rule 93 will apply are established at the following points:

West MP		East MP
	Oakland (Martinez line)	17.35
	" (Niles line)	15.82
	" (Alvarado line)	14.01
27.97	Port Costa	39.24
	" (Benicia spur)	End of track
	" (Tracy line)	37.08
47.05	Suisun-Fairfield	52.45
	" (Schellville Branch)	51.25
74.20	Davis	77.37
	" (Tehama line)	77.39
131.60	Sacramento (Stockton line)	136.33
37.50	Avon-Port Chicago	42.93
	(San Ramon Branch)	58.00
46.31	Pittsburg	51.68
61.00	Brentwood	62.70
78.50	Tracy (Martinez-Los Banos line)	85.64
66.50	" (Niles-Lathrop line)	74.37
59.85	Napa Jct. (Creston-Schellville line)	64.56
	" (Calistoga line)	62.21
	" (Vallejo line)	End of track
68.34	Napa-Calistoga	End of track and including Union Branch
71.72	Schellville (Lombard-Ignacio line)	NWP 38.93
	" (Sonoma line)	NWP 41.70
58.00	Elmira	61.00
	" (Winters Branch)	End of track

Oakland: Yardmen must use green flag by day and green light by night when signaling trains to enter or leave yard tracks.

Martinez: No. 10 or No. 12 may make reverse movements against the current of traffic on Eastward Track between Martinez and Signals 340 and 342, Ozol, without providing flag protection for such movements and without obtaining permission from Signal Operator. Signal Operator must not clear Signals 340 or 342 or authorize eastward trains to pass these signals until No. 10 or No. 12 has completed reverse movement against the current of traffic and departed station.

RULE D-97-A. Will apply as follows: Between Oakland (16th Street) and Sacramento; Martinez and Mococo.

RULE 98. Railroad crossings at grade not interlocked:

Trains and engines must approach with caution, and may move over the following crossings without stopping, if crossing clear and no movement approaching on intersecting line:

Benicia: Government Ry., crossing of Benicia spur near Benicia arsenal. If Signal 340 or 341 displays stop indication, flag protection must be provided on intersecting track before movement made over crossing.

Napa Jct.: Big balloon track crossing of Calistoga-Vallejo main track. Schellville line trains using big balloon track need not stop.

Stop clear of the following crossings, then proceed if no movement approaching on intersecting line:

Napa Jct.: Calistoga-Vallejo main track crossing of big balloon track. Calistoga-Vallejo line trains must stop.

Las Juntas: SNRy, crossing of San Ramon Branch.

Nitro: Narrow gauge crossings of spur tracks serving Atlas Powder Company.

RULE 103-A. Automatic crossing gates:

Following crossings protected by gates, with control circuits located within short distance of crossings.

Crews of trains or engines making stop, reverse movements, movements against current of traffic or movements from yard tracks over crossings, must know gates are down and crossings clear of vehicular traffic before entering crossings.

Station	Location	MP
*Emeryville	Powell Street	7.2
*Emeryville	65th Street	7.7
*Emeryville	66th Street	7.8
*Emeryville	67th Street	7.9
**Berkeley	Virginia Street	9.6
*Berkeley	Gilman Street	10.1
*Albany	Buchannan Street	10.9
*Richmond	Central Avenue	11.6
*Richmond	47th Street (Stege)	13.1
*Richmond	Cutting Blvd.	13.8
*Richmond	23rd Street	14.5
*Richmond	Barrett Avenue	15.1
*Richmond	Roosevelt Avenue	15.3
*Richmond	Pennsylvania Ave.	15.4
*Richmond	Kearney Street	15.6
*San Pablo	Chesley Avenue	16.3
*San Pablo	Market Street	16.6
*San Pablo	County Road No. 17	17.1
*San Pablo	County Road No. 20	17.2
**Martinez	Ferry Street	34.7
*Suisun-Fairfield	Cordelia Road	48.3
Suisun-Fairfield	Rio Vista Rd.	49.1
*Tolenas	Peabody Road	53.7
**Dixon (West)	"A" Street	67.4
**Dixon (East)	First Street	67.6
Vallejo	Georgia Street	67.6
**Port Chicago	Main Street	41.2
Los Medanos	County Road	50.8
Tracy	U. S. Highway 50	81.1

*Do not operate for against current of traffic movements at territory speeds and Rule 103-A will apply.

**Gates are not actuated when trains are stopping at station to receive or discharge traffic until train starts to move toward crossing, and speed of 10 MPH must not be exceeded until gates are down.

Berkeley: Westward passenger trains making station stop must stop with rear of train clear of Virginia Street.

Richmond: Eastward passenger trains stopping at Richmond Station will stop clear of impulse circuit 300 feet west of Barrett Avenue (which is designated by sign reading "Spot") to permit crossing gates to raise for vehicular traffic. When train starts, proceed slowly to permit gates to lower after passing impulse circuit.

Westward passengers train making station stop must stop with rear of train clear of Barrett Avenue.

Martinez: Crossing Gate Key Control installed at Ferry Street to actuate gates when backup movements made to clear junction switch.

Suisun-Fairfield: Eastward passenger trains stopping at station will stop clear of crossing circuit 80 feet west of Union Avenue designated by sign reading "Spot" on instrument case. When train starts, proceed slowly to permit vehicular traffic to clear crossing.

Lombard: Westward trains and engines stopping at Lombard Station will stop clear of impulse circuit 200 feet east of State Highway 29 designated by sign reading "SPOT". When train starts, proceed slowly to permit vehicular traffic to clear crossing.

Napa: When switching on or across any street crossing city ordinance requires that member of crew must protect crossing.

Public Utilities Commission orders prohibit operation of train, engine, motor or car over the following crossings unless first brought to a stop and traffic on the highway protected by a member of the crew:

Suisun-Fairfield	Crossing Union Ave. when moving against current of traffic, A-49.0,
Thomann	Crossing highway on Napa Valley Cooperative Winery spur, AB-86.0-C,
Vacaville	Crossing on Standard Oil spur, AD-63.15-C,
Davis	Crossing County road on University spur, A-75.7-C,
Port Chicago	Crossing County road on leads to Naval Supply Base, B-40.8-C, B-41.0-C,
Pittsburg	Crossings on industry spurs, B-47.8-C, B-48.1-C,
Brentwood	Crossing highway on Irrigated Farms spur, B-62.6-C.

RULE 104. The normal position of rigid switches at the end of double track and at junctions, is as follows:

Avon	San Ramon line, for siding,
Suisun-Fairfield	Napa Jct. line for west leg of wye to Oakland.
Napa Jct.	Suisun-Fairfield line, for Schellville line, at MP 61.60.
Schellville	Schellville Branch, for NWPRR main track.

Napa Jct.: Track known as big balloon is Schellville line main track.

RULE 105. Suisun-Fairfield: Eastward siding is first track south of eastward main track extending from MP 47.43 to MP 48.82.

Westward siding is first track north of westward main track extending from MP 49.43 to MP 47.43.

Westward trains entering siding, if length of train permits, must stop with rear of train clear of Union Avenue crossing.

North siding is first track north of main track on Schellville Branch extending from MP 48.94 to MP 49.95, to be used by trains from Schellville Branch to Sacramento line. May be used by other trains only when instructed by dispatcher.

Davis: Eastward siding is first track south of eastward main track extending from MP 75.88 to MP 76.71.

Westward siding is first track north of westward main track extending from MP 77.03 to MP 75.73.

North siding is first track west of main track on Gerber line extending from MP 75.79 to MP 76.52.

RULE 107. Station train indicators are provided in approach to following stations:

Eastward	Westward
Berkeley (2)	Richmond
Crockett	
Martinez	
Suisun-Fairfield	

When illuminated these indicators will convey the following information:

TRAIN—Train at platform on opposite track.
CLEAR—Indicator in service.

When neither TRAIN or CLEAR is illuminated, indicator is out of service and report must be made to chief train dispatcher as soon as practicable.

RULE 221. West Oakland, Rodeo and Avon are train-order offices only for trains originating.

Trains operating on Vallejo Branch must obtain clearance at Lombard OK'd by the Chief Train Dispatcher.

RULE D-251. Will apply as follows: On westward track between Sacramento and Oakland (16th Street). On eastward track between Oakland (16th Street) and Sacramento.

RULE 291-A. Flashing yellow lamp unit installed on the mast of the eastward interlocking signal on the Coach Yard lead track and is displayed in both eastward and westward directions. Illumination of this flashing yellow light observed from either direction will authorize an eastward reverse move toward 16th Street or Bays following a westward move into the Coach Yard which does not clear the interlocking plant.

RULE 306. The following block signals equipped with triangular plate bearing the letter "P" have included in their control limits some special protective device. Interlocking signals are listed as "P-I" or "P-SA".

Eastward Signal	Protection	Westward Signal
P-I	Collision detector, highway underpass west end of wye, Davis	P-I
	Spring switch, end double track, Mococo	P-359
P-464	Collision detector, highway underpass, MP 47.19 (Pittsburg)	P-479
P-510	Collision detector, highway underpass, MP 50.97 (Los Medanos)	P-519
P-710	Spring switch, junction to Los Banos line, Tracy	
	Spring switch to yard, Tracy	P-829
P-SA	Dragging equipment detector, MP 34.8	
	Dragging equipment detector, MP 35.9	P-347

A 2-indication, light type indicator installed just below interlocking signal P-SA located 550 feet west of draw span, and a 2-indication, light type indicator attached to the mast of signal P-347, are designated as dragging equipment indicators.

They will display red aspect with signal at "STOP" when actuated by dragging equipment detector, and lunar white aspect when not actuated by dragging equipment detector.

Crews of trains stopped by signals P-SA or P-347 with the red indicator light illuminated, will inspect their train for dragging equipment.

Signal may be cleared and indicator light changed to lunar white by pressing push button located on signals P-SA and P-347 after first complying with Rule 306.

RULE 505. AUTOMATIC BLOCK SIGNAL SYSTEM

Cannon: Electric locks installed on crossover switches and on switch for Sacramento Northern connection to the eastward track. Page 4, Special Instructions will govern.

Ozol: When Signals 340 and 342 display stop indication, eastward train or engine must stop and not proceed until signal displays proceed indication or permission to proceed obtained from Signal Operator at Martinez. Telephone located about 100 feet east of Signal 340.

Tracy: Top unit of Signal P-710 governs movements toward Lathrop. Bottom unit governs movement toward Los Banos.

Signals 713, 825 and 827 are approach clearing. Signal 713 will revert to stop position when 600-ft. track circuit in front of station building is occupied for approximately four minutes. A second approach circuit is located 185 feet east of MacArthur Blvd. to clear Signal 713 for movements to continue.

Approach circuit to Signal 825 on Track No. 1 begins 185 feet east of MacArthur Blvd.

Approach circuit sign is north of main track 185 feet east of MacArthur Blvd.

Top unit of Signal P-829 governs movements on main track. Bottom unit governs movements to yard.

Signals 716 and 723 on Track No. 1 at crossovers near MP 72 govern movements over crossovers to enter main track only. These signals will not be lighted when crossovers are lined normal. Time circuits are provided to cut out west control of Signal 716, 2 minutes and 40 seconds after crossover is lined; east control of Signal 723, 6 minutes and 10 seconds after crossover is lined; and west control of 736, 5 minutes and 20 seconds after crossover is lined. If signals fail to clear at expiration of time interval, Rules 509 and 510 will govern.

Top unit of Signal 735 governs movements on main track. Bottom unit governs movements into yard over crossover. Top unit of Signal 736 on Track No. 1 governs movements to the freight lead. The center unit governs movements to the main track, over the crossover. The bottom unit, when displaying a lunar light governs movements to the Freight Lead per Rule 289.

RULE 512. Block indicators adjacent to east switch of crossover and switch to Sacramento Northern connection apply to the eastward main track only.

RULE 513. On Westward trip before making crossover movement at Cannon, permission must be received from signal operator, Davis.

On Eastward trip before entering Main Track at Cannon, permission must be recieved from signal operator, Davis.

PUSH BUTTONS—Tracy:

Push buttons are located on Signal 827 on Los Banos line, and instrument case east of MacArthur Blvd. on Lathrop line to clear signals over junction switch.

Push buttons are located on instrument case opposite Signals 828 and 826, Los Banos line, west of spring switch to yard.

RULE 516. Overlap posts:

Los Medanos (250 feet west of Signal 509)..........Westward trains.

RULE 535. SPRING SWITCHES

Spring switches equipped with facing point locks are located as follows:

Location		Normal Position
Mococo	End double track	Westward track
Tracy	Junction switch MP 71.16 to Los Banos line	Lathrop Subdivision

Spring switches not equipped with facing point locks are located as follows:

*West Oakland	1st and 16th St. line	16th St. line
*Stege	Seaver wye	East leg of wye
*Ozol	East end siding	Main track
*Ozol	West end siding	Main track
Martinez	Junction switch	Bridge line
*Suisun-Fairfield	East end north siding	Main track
*Lombard	East end siding	Main track
*Lombard	West end siding	Main track
Tracy	MP 82.98 Los Banos main to yard	Yard Track

*Equipped with switch-point indicator.

RULE 605. INTERLOCKING

On double track within Oakland yard limits signal operator may arrange to move trains from one tower to another against the current of traffic, after having an understanding by telephone for each movement. Before moving trains against current of traffic signal operator must know that track to be used is clear of opposing engines and trains.

Trains and engines moving out westward limits, West Oakland interlocker toward Bays are operated on yard tracks.

Oakland, 16th St.: Limits extend from signals 427 feet east of MP 5 on the Martinez line to Signal Bridge 204 and from Signal Bridge205 to Signal Bridge 206.

Whistle signals:

To West Oakland Yard, o — —,
From AT&SFRy interchange to West Oakland, — —,
To AT&SFRy interchange, o — o.

Telephones to 16th Street Tower and West Oakland Tower located at signal locations west of 16th Street Tower.

Telephones to 16th Street Tower at the following locations:
Signal Bridge 205 west end of Shellmound,
Signal Bridge 206 east end of Shellmound,
East end of Judson Spur, Shellmound.

West Oakland (First and Cedar Sts.): Limits extend from signals at Cedar Street on Niles line to signals 427 feet east of MP 5 on Martinez line.

Eastward signals on First Street lead 227 feet west of First Street freight lead crossing, eastward signal on washer track 144 feet west of freight lead, eastward signals on 16th Street lead at clear point, 187 feet west of freight lead switch, westward signals on diesel tracks, coach lead and yard leads 40, 50 and 60.

Telephones to 16th Street Tower and West Oakland Tower are located at signal locations west of 16th Street Tower.

A flashing yellow lamp unit, Rule 291-A, installed on the mast of the eastward interlocking signal on the Coach Yard lead track will and be displayed in both eastward and westward directions. Illumination of this flashing yellow light observed from either direction will authorize an eastward reverse move toward 16th Street or Bays following a westward move into the Coach Yard which does not clear the interlocking plant.

Martinez: Limits extend on eastward main track from home signal 600 feet east of station building to westward dwarf signals 938 feet east of station building on Tracy line and on Suisun Bay bridge line.

Limits extend on westward main track from signals 2350 feet east of station building on Tracy line and on Suisun Bay bridge line, to interlocking signal 50 feet west of junction switch. Signal operator's permission must be obtained before fouling westward main track at crossover and switches from spurs to westward main track between Martinez and Ozol.

Whistle signals:
To Bridge line, o — —,
To Tracy line, — o —.

Suisun Bay Bridge, Martinez: Bridge zone limits extend on both tracks from home signals 800 feet east of draw span to home signals 550 feet west of draw span.

Davis: Limits extend on eastward and westward main tracks from interlocking signals at MP 75.25 to interlocking signal on signal bridge at MP 75.98 on westward main, interlocking signals 325 feet west of MP 75.98 on eastward main and east pass, interlocking signal at MP 75.97 on the west pass and to westward interlocking signal at MP 75.55 on the Gerber line.

The switch to the University spur is hand throw. Member of crew will operate hand throw switch after receiving permission of signal operator. Dwarf signal at clear point is an interlocking signal.

Cranks for hand operating power switches are mounted on signal instrument case on south side of track at west end of street underpass on the west end, on instrument case on south side of track opposite P.G.& E. switch on the Sacramento end, and on instrument case between 3rd Street and 4th Street on the Woodland end.

When necessary to hand operate power switches, permission must be obtained from the signal operator and be governed by Rules 771 and 772.

Instructions for hand operating power switches are mounted on cases above crank holders.

Whistle signals:
To or from Sacramento from or to Woodland line, o — —,
Western Division eastward trains to enter siding, — o —.

Sacramento River Drawbridge: Eastward trains stopped by interlocking signal at MP 87.94 must contact Sacramento Yardmaster and if authorized to enter yard, must then contact signal operator, Sacramento River Drawbridge, and be governed by Rules 662 and 663.

Brazos Drawbridge over Napa River: Movement over bridge not permitted unless signal operator on duty.

Tracy: Limits extend from westward SA Signal at MP 70.68 to eastward SA Signal at MP 70.62 on the Niles line and to eastward SA Signal at MP 82.18 on the Martinez line.

Position of the junction switch between Niles Subdivision MP 70.66 and Martinez Subdivision MP 82.16 controlled by yardman from control panel located at the base of the Yardmaster's tower.

The junction switch between Niles Line MP 70.66 and Martinez Line MP 82.16 is equipped with a dual control machine. When necessary to hand throw this switch, permission must be secured from the Yardmaster and Rules 771 and 772 govern.

Interlocking portion of the SA signal controlled by Tracy Telegraph Operator.

The telegraph operator shall determine that switch has been lined for proper route before clearing a signal.

RULE 663(b). (Interlocking).

Signal Operator at
TRACY
MARTINEZ
DAVIS

may authorize movements under provisions of this rule after it has been ascertained indication lights on control panel are illuminated indicating dual control switches are in proper position and locked for movement without requiring dual control switches to be placed in hand position as required by Rule 772.

When indication lights on control panel are not illuminated movements may be authorized under provisions of this rule; however, before making a facing point or trailing point movement over dual control switches, such switches must be placed in hand position in accordance with Rule 772 and locked until movement over switch has been completed. When movement has been completed, switch must be returned to normal position and selector lever restored to motor position and locked.

RULE 680. AUTOMATIC INTERLOCKING

SNRy Crossing, MP 86.90: Limits extend between interlocking signals in approach to both sides of crossing.

RULE 705. LETTER TYPE INDICATORS

Indicators located as follows:

Illum. Letter	On Signal	Approaching	Authorizes and Requires Movement as Follows
W	77	Oakland (16th St.)	Stop east of 67th St. Emeryville and wait until Signal 77 displays proceed indication.
S	224	Pinole	Enter eastward siding Pinole and remain in siding until letter "M" is displayed.
M	7-ft. mast east end eastward siding	Pinole	Enter main track and proceed as prescribed by Rule D-251.
S	245	Pinole	Enter westward siding Pinole and remain in siding until letter "M" is displayed.
M	7-ft. mast west end westward siding	Pinole	Enter main track and proceed as prescribed by Rule D-251.
S	409	Bahia	Enter siding Bahia and remain in siding until letter M is displayed.
M	West end center siding	Bahia	Enter main track and proceed as prescribed by Rule D-251.
S	354	Bahia	Enter siding at Bahia and remain in siding until letter M displayed.
M	East end center siding	Bahia	Enter main track and proceed as prescribed by Rule D-251.

Illum. Letter	On Signal	Approaching	Authorizes and Requires Movement as Follows
S	505	Suisun-Fairfield	Enter siding Suisun-Fairfield and remain in siding until letter M displayed.
M	7-ft. mast west end westward siding	Suisun-Fairfield	Enter main track and proceed as prescribed by Rule D-251.
S	450	Suisun-Fairfield	Enter siding at Suisun-Fairfield.
W	672	Dixon	Eastward train must stop and not proceed until indicator is extinguished except trains may proceed not exceeding restricted speed to the next home signal after receiving verbal authority from the train dispatcher. A telephone is located at Signal 672.
H	702	Tremont	Eastward trains must stop west of road crossing A-71.6 at Tremont and member of crew open small door on track side of Hot Box Locator, located west of crossing A-71.6. Numerals displayed by indicators inside the box indicate location of hot bearings in relation to rear axle of train. Top row indicates hot bearings on right side of train, lower row on left side of train in direction of movement. Indicators will display a maximum of four hot bearings on each side of train. All journals of car indicated must be inspected as well as all journals of each adjoining car. After hot bearing has been located from information furnished by indicators, press black push button to cancel numbers on the indicator. Door must be closed and secured with switch lock. A phone is located at Crossing A-71.6 for giving information to train dispatcher.
S	783	Davis	Enter westward siding (applies to freight trains only).

Display of letter "M" does not relieve conductors or engineers of compliance with Rule 513.

RULE 715. Automatic Train Stop eastward track from Martinez to westward dwarf signal 300 feet east of draw span.

When Signal 328 displays yellow aspect, trains must not exceed 15 MPH from this signal to track magnet located 550 feet west of semi-automatic signal, opposite white concrete marker block.

Automatic Train Stop westward track from 100 feet east of Signal 357 to Martinez.

When Signal 347 displays yellow aspect, trains must not exceed 15 MPH from this signal to track magnet located 1250 feet east of semi-automatic signal, opposite white mark on bridge.

GENERAL REGULATIONS

RULE 825. Elmira: Not less than three hand brakes must be set on west end of cars left standing except with less than three hand brakes all brakes must be set.

Tracy: All freight trains entering Tracy Yard will tie no less than three hand brakes on the east end unless instructed otherwise by Yardmaster.

Train crews must not release brakes on outbound trains until engine is coupled and brake pipe is charged.

RULE 827. Passenger trains operating between West Oakland and Gerber, except streamlined Cascade and Shasta Daylight, making station stop at Davis, must approach at speed not exceeding 8 MPH to allow forward brakeman to detrain on station side, where rear of train will stop. He will make rolling inspection of train, then walk length of train on opposite side, making standing inspection, giving careful attention to running gear and journal boxes and entrain on station side.

Tracy: Passenger trains and trains consisting entirely of passenger equipment, except Nos. 51 and 52, must approach Tracy at speed not exceeding 8 MPH to allow forward brakeman to detrain on station side, where rear of train will stop. He will make rolling inspection of train, then walk length of train on opposite side, making standing inspection, giving careful attention to running gear and journal boxes and entrain on station side.

RULE 830. Martinez: When trains 51 and 9 performing station work block Ferry Street crossing, trains 12 and 58 will approach Ferry Street and wait until trains 51 and 9 have cleared and vehicular traffic allowed to move before blocking this crossing.

Trains 9, 11 and 51 will stop with units clear of Ferry Street crossing, and, if train is of sufficient length, after head end work completed second stop will be made blocking Ferry Street to detrain passengers.

Trains 57 and 101 will make normal station stop, blocking Ferry Street but not to exceed 10-minutes, except when No. 57 transfers to No. 10 two stops will be necessary; first stop to be made with units to clear Ferry Street.

Eastward passenger trains making station stop at Martinez, except Nos. 12, 52 and 58 will make normal station stop, blocking Ferry Street, but not to exceed 10-minutes.

Schellville: Trains arriving and departing and when switching movements are being made over Highway Crossing No. 12, Schellville crossing will be cleared after each move is made to allow vehicular traffic to pass.

Tracy: Trains 51, 52, 53 and 54 make station stop at Station (Lathrop Line), clearing MacArthur Boulevard.

Trains 57 and 58 will make station stop at Station (Los Banos Line).

RULE 858. Between Oakland (16th Street) and San Francisco passengers and hand baggage will be transported by bus; checked baggage, mail and express by truck.

AIR BRAKE RULES

RULE 2. Enginemen taking charge of engines for freight and passenger service at West Oakland diesel shop and Tracy will consider that condensation has been drained from reservoirs, and from moisture and dirt collectors; that sanders are operating properly; that there are no flat spots on wheels.

RULE 17. Retaining valves must be used on freight and mixed trains as follows:

With less than two dynamic brakes in operation, trains consisting of more than 110 cars which average over 60 tons per operative brake must use 20 retaining valves on head end of train on descending grade from Creston to Cordelia.

FREIGHT TRAINS

RULE 22. Trainmen must not couple air hose on outgoing trains at Ozol or Suisun-Fairfield until train is made up and caboose and road engine are on train. Coupling caboose and road engine to train will be considered as an indication that the train is made up and switchmen have completed their work. Switchmen must not perform switching on or couple other cars to a train on which the caboose and road engine have been attached without instructions from the yardmaster, who will see to it that members of the crew are notified in advance.

RULE 33. When gross tonnage of freight train handling cars with single capacity brakes exceeds 80 tons per operative brake, maximum speed of train must not exceed 45 MPH, except when gross tonnage exceeds 85 tons per operative brake, maximum speed must not exceed 25 MPH on descending grades of 1.2% to 1.5% and 20 MPH on descending grades in excess of 1.5%. Grades where such restrictions apply will be:

OAKLAND TO SACRAMENTO

Maximum speed of freight trains must not exceed 20 MPH on descending grade between the following milepost locations when gross tonnage exceeds 85 tons per operative brake:

Eastward

MP 33.8 to MP 36.0 (Eastbound main)

SCHELLVILLE BRANCH

Westward

MP 55.0 to MP 58.0

Maximum speed of freight trains must not exceed 25 MPH on descending grade between the following milepost locations when gross tonnage exceeds 85 tons per operative brake:

Eastward

MP 58.0 to MP 62.8

CALISTOGA BRANCH

Westward

MP 77.0 to MP 79.0

RULE 39. Running test must be made as follows: Eastward and westward trains at Creston.

MISCELLANEOUS

Westward passenger trains making station stop at Martinez will stop with units clear of Ferry Street Crossing, and if train is of sufficient length after head end work completed, second stop will be made to detrain passengers.

Eastward passenger trains making station stop at Martinez, except No. 12 and No. 10, will make normal station stop blocking Ferry Street, but not to exceed ten minutes.

No. 12 must be routed via Mococo Line and will pull rear end to clear Ferry Street. After head end work completed and passengers entrained, train will make reverse movement, head end to clear junction switch as follows:

> Before making reverse movement against current of traffic over Ferry Street on eastward track, a member of crew will lower the crossing gates by operating switch key control located on the east side of the crossing gate adjacent to station building, turning switch key to RIGHT to lower crossing gates, and remove key before commencing movement. If reverse movement is delayed after crossing gates are lowered, the gates may be raised by use of key control; turn key to LEFT to raise crossing gates.
>
> Before reverse movement is made from Mococo Line, operator at Martinez will operate toggle switch on the control machine, holding Signals 340 and 342 in stop position until backup movement is completed, after which toggle switch must be returned to normal position.

No. 10 when making transfer at Martinez off Train No. 57 will also be lined to the Mococo Line and reverse movement made in accordance with above instructions.

10. Engines listed must not operate on tracks shown below.

Class of Engine	Restricted Tracks
All	Rocktram—Three spur tracks diverging from interchange tracks on river side of main track.

11. Load limit (car and contents):

Oakland-Sacramento	263,000 pounds
***Martinez-Tracy	263,000 pounds
Suisun-Fairfield-Schellville	240,000 pounds
Napa Jct.-Union	240,000 pounds
Union-Larkmead	230,000 pounds
*Larkmead-Calistoga	169,000 pounds
Union-West Napa	240,000 pounds
Napa Jct.-Vallejo	240,000 pounds
Elmira-Winters	240,000 pounds
*Winters-Esparto	240,000 pounds
**Avon-Radum	210,000 pounds

*Exception: Passenger equipment on six axles weighing not over 200,000 pounds may be handled.

**When notified that false bents are not in place on bridge 56.99 load limit between Avon and Radum will be 169,000 pounds.

***Cars SP 463000 through 463499, maximum gross load per car is 260,000 pounds when operated in series.

Unless authorized by Superintendent, heavier loads must not be handled.

13. LOCATION OF STOCK YARDS

Station	Capacity in cars
Suisun-Fairfield	10 (Water)
Cannon	10 (Water)
Dixon	28 (Water)
Flosden	3
Schellville	5 (Water)

30.

LOCATION OF OVERHEAD AND SIDE STRUCTURES NOT STANDARD CLEARANCE ON MAIN TRACK AND SIDINGS

Mile Post	Location	Description	
6.4	Emeryville	Key System underpass	Side
6.6	Emeryville	W. U. pole line, near Park Ave	Side
14.5	Richmond	AT&SFRy overhead bridge	Overhead
16.0	San Pablo	AT&SFRy overhead bridge	Overhead & side
34.7	Martinez	Alhambra slough bridge	Side
88.5	Washington	Sacramento River drawbridge	Side
63.6	Vacaville	Ulatis Creek bridge	Side
75.8	Winters	Putah Creek bridge	Side
52.5	Thomasson	Suisun Creek bridge	Side
53.0	Thomasson	Tunnel	Overhead
93.5	Maple	Napa River bridge	Side
37.9	Avon	Pachecho slough bridge	Side
43.1	Nichols	Wagon bridge	Overhead & side
43.2	Nichols	AT&SFRy overhead bridge	Overhead & side
48.8	Pittsburg	Signal bridge	Overhead
64.7	Brazos	Drawbridge over Napa River	Side
44.6	Hookston	Walnut Creek bridge	Overhead & side
49.2	Walnut Creek	San Ramon Creek bridge	Overhead & side
57.0	San Ramon	San Ramon Creek bridge	Overhead & side

SPECIAL INSTRUCTIONS—MARTINEZ SUBDIVISION

SPEED RESTRICTIONS FOR TRAINS: Maximum speed of trains in territory shown below is subject to further restrictions applicable to engines in the train as shown in SPEED RESTRICTIONS FOR ENGINES appearing on page 5 and MAXIMUM SPEED PERMITTED WITH CERTAIN EQUIPMENT, and OTHER MAXIMUM SPEEDS appearing on page 6 of Special Instructions for All Subdivisions. Speed must be further reduced as prescribed by speed signs, except as specifically authorized by Special Instructions herein, or by timetable bulletin.

All trains must run carefully during and after heavy storms, particularly when the track is apt to be affected. When fog, storms or other conditions obscure track or signals, speed of trains must be so reduced as to permit strict observance of signals and INSURE SAFETY REGARDLESS OF TIME.

TERRITORY MP MP Column:	PASSENGER TRAINS 1	FREIGHT AND MIXED 2	LIGHT ENGINES 3
EASTWARD, WEST OAKLAND TO SACRAMENTO:			
4.9 to 4.25	15	15	15
4.25 to 4.81 (crossing)	20	20	20
4.81 to 7.75	45	45	45
7.75 to 16.31	60	60	60
16.31 to 21.50	70	60	70
21.50 to 34.40	45	45	45
★34.40 to 34.70 (Martinez)	30	30	30
34.70 to 35.50	45	45	45
35.50 to 37.12	79	60	70
37.12 to 37.40	70	60	70
37.40 to 48.38	79	60	70
48.38 to 49.00	55	55	55
49.00 to 75.20	79	60	70
75.20 to 76.00, except:	45	40	45
★★75.25 to 75.60 (crossover and west leg wye to Gerber line)	20	20	20
76.00 to 87.79	79	60	70
87.79 to 88.54 (SHRy. crossing)	20	20	20
88.54 to 89.00	10	10	10
EASTWARD, AGAINST CURRENT OF TRAFFIC:			
West Oakland to Sacramento	59	49	49
(Subject to lesser speeds on westward track), except:			
31.10 to 31.11 (Ozol)	35	35	35
34.20 to 34.21 (Ozol)	35	35	35
75.20 to 76.00	20	20	20
EASTWARD, MARTINEZ TO TRACY:			
34.70 to 35.88	35	35	35
35.88 to 35.91	25	25	25
35.91 to 48.15	79	60	70
48.15 to 48.90	79	50	70
★48.90 to 48.95 (Pittsburg)	25	25	25
48.95 to 53.30	79	60	70
★★★53.30 to 53.60 (Antioch)	45	45	45
53.60 to 80.70	79	60	70
80.70 to 81.83	45	45	45
81.83 to 82.24 (jct. Niles line)	20	20	20
82.24 to 82.58 (jct. Los Banos line)	35	35	35

TERRITORY MP MP Column:	PASSENGER TRAINS 1	FREIGHT AND MIXED 2	LIGHT ENGINES 3
WESTWARD, SACRAMENTO TO WEST OAKLAND:			
89.00 to 88.54	10	10	10
88.54 to 88.12	25	25	25
88.12 to 87.80	45	45	45
87.80 to 76.00	79	60	70
76.00 to 75.20, except:	45	40	45
★★75.60 to 75.36 (West leg wye and jct. switch)	20	20	20
75.20 to 49.00	79	60	70
49.00 to 48.38	55	55	55
48.38 to 35.50	79	60	70
35.50 to 34.70	45	45	45
★34.70 to 34.40 (Martinez)	30	30	30
34.40 to 21.50	45	45	45
21.50 to 16.31	70	60	70
16.31 to 7.75	60	60	60
7.75 to 4.81	45	45	45
4.81 to 4.25 (crossing)	20	20	20
4.25 to 4.9	15	15	15
WESTWARD, AGAINST CURRENT OF TRAFFIC:			
Sacramento to West Oakland	59	49	49
(Subject to lesser speeds on eastward track), except:			
34.21 to 34.20 (Ozol)	35	35	35
31.11 to 31.10 (Ozol)	35	35	35
76.00 to 75.20	20	20	20
WESTWARD, TRACY TO MARTINEZ:			
82.58 to 82.24 (jct. Los Banos line)	35	35	35
82.24 to 81.83 (jct. Niles line)	20	20	20
81.83 to 80.70	45	45	45
80.70 to 53.60	79	60	70
★★★53.60 to 53.30 (Antioch)	45	45	45
53.30 to 49.70	79	60	70
49.70 to 48.95	79	50	70
★48.95 to 48.90 (Pittsburg)	25	25	25
48.90 to 35.91	79	60	70
35.91 to 34.70	30	30	30

★Regulated by City ordinance. ★★ICC Regulation. ★★★Regulated by PUC order.

Freight and mixed trains containing no restricted cars are authorized to operate at Column 1 speeds not exceeding 60 MPH (65 MPH between Martinez and Tracy) consistent with local restrictions account grade and other conditions, provided trains:

1. Do not exceed 120 cars and 40 tons per operative brake; or,
2. When carrying 90 lbs. brake pipe pressure, do not exceed:

Number of Cars	Tons Per Operative Brake
70	60
75	59
80	58
85	57
90	56
95	55
100	54
105	53
110	52
115	51
120	50

SPECIAL INSTRUCTIONS—MARTINEZ SUBDIVISION

SPEED RESTRICTIONS FOR TRAINS: Maximum speed of trains in territory shown below is subject to further restrictions applicable to engines in the train as shown in SPEED RESTRICTIONS FOR ENGINES appearing on page 5 and MAXIMUM SPEED PERMITTED WITH CERTAIN EQUIPMENT, and OTHER MAXIMUM SPEEDS appearing on page 6 of Special Instructions for All Subdivisions. Speed must be further reduced as prescribed by speed signs, except as specifically authorized by Special Instructions herein, or by timetable bulletin.

All trains must run carefully during and after heavy storms, particularly when the track is apt to be affected. When fog, storms or other conditions obscure track or signals, speed of trains must be so reduced as to permit strict observance of signals and INSURE SAFETY REGARDLESS OF TIME.

TERRITORY MP MP Column:	FREIGHT AND MIXED 1	LIGHT ENGINES 2	TERRITORY MP MP Column:	FREIGHT AND MIXED 1	LIGHT ENGINES 2
EASTWARD, AVON TO RADUM:			WESTWARD, RADUM TO AVON:		
38.10 to 44.64	25	25	67.80 to 57.02	25	25
44.64 to 44.67 (bridge)	15	15	57.02 to 56.99 (bridge)	15	15
44.67 to 49.22	25	25	56.99 to 49.25	25	25
49.22 to 49.25 (bridge)	15	15	49.25 to 49.22	15	15
49.25 to 56.99	25	25	49.22 to 44.67	25	25
56.99 to 57.02 (bridge)	15	15	44.67 to 44.64 (bridge)	15	15
57.02 to 67.80	25	25	44.64 to 38.10	25	25
EASTWARD, ELMIRA TO ESPARTO:			WESTWARD, ESPARTO TO ELMIRA:		
59.60 to 76.00	25	25	90.35 to 76.00	15	15
76.00 to 90.35	15	15	76.00 to 59.60	25	25
EASTWARD, SUISUN-FAIRFIELD TO SCHELLVILLE:			WESTWARD, SCHELLVILLE TO SUISUN-FAIRFIELD:		
48.93 to 49.30	15	15	NWPRR. on wye to 72.60	10	10
49.30 to 61.47	35	35	72.60 to 65.25	35	35
61.47 to 61.77 (Napa Jct.)	15	15	65.25 to 64.15 (drawbridge)	15	15
61.77 to 64.15	35	35	64.15 to 61.77	35	35
64.15 to 65.25 (drawbridge)	15	15	61.77 to 61.47	15	15
65.25 to 72.60	35	35	61.47 to 49.30	35	35
72.60 to NWPRR. on wye	10	10	49.30 to 48.93	15	15
EASTWARD, NAPA JUNCTION TO VALLEJO:			WESTWARD, VALLEJO TO NAPA JUNCTION:		
61.60 to 61.75	15	15	69.00 to 66.65	15	15
61.75 to 66.65	25	25	66.65 to 61.75	25	25
66.65 to 69.00	15	15	61.75 to 61.60	15	15
EASTWARD, NAPA JUNCTION TO CALISTOGA:			WESTWARD, CALISTOGA TO NAPA JUNCTION:		
61.25 to 61.30	15	15	95.78 to 87.70	25	25
61.30 to 69.20, except:	35	35	★87.70 to 87.00 (St. Helena)	20	20
Thru turnouts at MP 65.86 and 66.40	15	15	87.00 to 79.50	25	25
★69.20 to 71.10 (Napa)	25	25	79.50 to 71.78	35	35
71.10 to 71.60	35	35	71.78 to 71.60 (highway crossing)	15	15
71.60 to 71.78 (highway crossing)	15	15	71.60 to 71.10	35	35
71.78 to 79.50	35	35	★71.10 to 69.20 (Napa)	25	25
79.50 to 87.00	25	25	69.20 to 61.30, except:	35	35
★87.00 to 87.70 (St. Helena)	20	20	Thru turnouts at MP 66.40 and MP 65.86	15	15
87.70 to 95.78	25	25	61.30 to 61.25	15	15
EASTWARD, WEST NAPA TO UNION:	15	15	WESTWARD, UNION TO WEST NAPA:	15	15

★Regulated by City ordinance.

On Calistoga Branch between locations shown below maximum speed must not be exceeded when handled by following engines subject to further restrictions shown in SPEED RESTRICTIONS FOR TRAINS TABLE above:

MP 78.56 to MP 92.30

DS 9 to 12, 100 to 122 .... 10 MPH

MP 78.56 to MP 95.78

DP 3, 4, 7, 8, 9, 12 .... 10 MPH
DF 114a, 121, 122, 124, 125, 127, 303 .... 10 MPH
DP 4, 5, 6, 10, 11, 13 .... 15 MPH
DF 101, 103 to 108, 110, 112, 114, 115, 117 to 120, 123, 126, 300 to 302 .... 15 MPH
DF 116, 800 .... 20 MPH
DS 1, 4, 5 .... 20 MPH
DS 2, 3, 6, 7, 8 .... 25 MPH

On Union Branch between locations shown below maximum speed must not be exceeded when handled by following engines subject to further restrictions shown in SPEED RESTRICTIONS FOR TRAINS TABLE above:

DF 1, 6, 7, 109, 111, 306, 500, 501 .... 10 MPH
DS 101 to 103, 106, 107, 109, 110, 112 to 114, 117, 119 to 122 .... 10 MPH

SPEED RESTRICTIONS FOR OTHER THAN MAIN TRACKS	With Caution Not Exceeding MPH
Through sidings, yard and other tracks, wyes, balloon tracks, crossovers and turnouts, except:	15
Through slip switches	10
Through turnouts on other than sidings	10
On branches	10

SPECIAL INSTRUCTIONS—MARTINEZ SUBDIVISION

RATING OF ENGINES—In Units of 2000 Lbs. (Tons)

NOMINAL CLASS	ENGINE NUMBERS	Oakland and Martinez	Martinez to Bridge Summit	Bridge Summit to Sacramento ③	Sacramento to Martinez ②	Martinez and Tracy
DP-4, 7, 12	6000 to 6004, 6017, 6018, 6046 to 6054, 5900 to 5909, 5916, 5917	3400	1400	2975	2650	3400
DP-5, 6, 8 to 11	6005 to 6016, 6055 to 6064, 5910 to 5915 6019 to 6045, 5918 to 5924	3425	1400	2975	2650	3425
DP-13	6067 to 6068	....	....	....	....	....
DF-1 to 12	6138 to 6470, 8022 to 8305, except	3750	1600	3300	2950	3750
	with 61:16 gear ratio					
	with 60:17 gear ratio	3000	....	....	....	3000
DF-100	5200 to 5202	....	....	....	....	....
DF-101 to 108, 110, 112	4900 to 4902, 5203 to 5248, 5253 to 5278	5000	2475	4600	4100	5000
DF-109, 111	4903 to 4905, 5250 to 5252	5000	3050	5000	5500	5000
DF-114, 116 to 118, 120 to 122, 124, 125	5279 to 5293, 5308 to 5335, 5339 to 5444, 5449 to 5493	6100	2575	5425	4800	6100
DF-123, 126	5448, 5494 to 5507	....	....	....	....	....
DF-500, 501	4800 to 4815	....	....	....	....	....
DF-502	4816 to 4818	....	....	....	....	....
DF-602, 603, 605 to 607, 611, 612, 616	5600 to 5719, 5730 to 5844, 5872 to 5895	3950	1700	3520	3130	3950
DF-608 to 610, 613, 614, 615	5720 to 5729, 5845 to 5871	4050	1750	3650	3250	4050
DF-800	9000 to 9002	7625	3150	6675	5950	7625
DS-1 to 8	1000 to 1032	1625	660	1425	1275	1625
DS-9 to 12	1033 to 1090	....	....	....	....	....
DS-100 to 109, 111, 115 119	1300 to 1441, 1464 to 1485, 1514 to 1528, 1551 to 1567	2450	1025	2650	1925	2450
DS-110, 114, 118	1442 to 1463, 1492 to 1513, 1539 to 1550	3200	1400	2775	2475	3200
DS-113, 117, 120 to 122	1486 to 1491, 1529 to 1538, 1568 to 1596	....	....	....	....	....
DS-200, 201	1900 to 1903	....	....	....	....	....
DS-500 to 506	5100 to 5120	2000	850	1775	1575	2000
DS-600 to 604	4600 to 4623, 4700 to 4703	3250	1350	2900	①2550	3250
DS-605, 606	4624 to 4633	3600	1475	3150	2800	3600
DS-607	4634 to 4645	....	....	....	....	....

①Applies Sacramento to Suisun-Fairfield only.
②Will not apply to Sacramento Northern Engines.

UNLESS AUTHORIZED BY SUPERINTENDENT, ENGINES WILL NOT BE PERMITTED TO OPERATE IN THOSE TERRITORIES WHERE NO RATING IS SHOWN IN ENGINE RATING TABLE.

RATING OF ENGINES—In Units of 2000 Lbs. (Tons)

NOMINAL CLASS	ENGINE NUMBERS	Suisun-Fairfield to Napa Jct.	Napa Jct. to Suisun-Fairfield	Napa Jct. and Larkmead Union and West Napa	Larkmead and Calistoga	Napa Jct. to Schellville Napa Jct. to Vallejo	Schellville to Napa Jct.
DF-1 to 12	6138 to 6470, 8022 to 8305, except	1000	1300	....	....	6050	2475
	with 61:16 gear ratio	....	....	....	....	....	....
	with 60:17 gear ratio	....	....	....	....	....	....
DF-100	5200 to 5202	....	....	....	....	....	....
DF-101, 103 to 108, 110, 112	4900 to 4902, 5203 to 5248, 5253 to 5278	1575	2100	3825	....	5000	3825
DF-109, 111	4903 to 4905, 5252	1875	2525	2450		5000	4700
DF-114, 116 to 118, 120 to 122, 124, 125	5279 to 5293, 5308 to 5335, 5339 to 5444, 5449 to 5493	1600	2175	2100	....	10000	4200
DF-115, 119, 123, 126	5448, 5494 to 5507	1650	2100	....	....	....	....
DF-500, 501	4800 to 4815	....	....	....	....	....	....
DF-502	4816 to 4818	....	....	....	....	....	....
DF-602, 603, 605 to 607, 611, 612, 616	5600 to 5719, 5730 to 5844, 5872 to 5895	1080	1400	....	....	....	....
DF-608 to 610, 613, 614, 615	5720 to 5729, 5845 to 5871	1100	1475	....	....	10000	2725
DS-1 to 8	1000 to 1032	400	550	525	525	4000	1050
DS-9 to 12	1033 to 1090	....	....	....	....	....	....
DS-100 to 109, 111, 115, 119	1300 to 1441, 1464 to 1485, 1514 to 1528, 1551 to 1567	800	1050	....	....	4000	2000
DS-110, 114, 118	1442 to 1463, 1492 to 1513, 1539 to 1550	775	1050	①1025	....	4000	2050
DS-113, 117, 120 to 122	1486 to 1491, 1529 to 1538, 1568 to 1596	....	....	....	....	....	....
DS-200, 201	1900 to 1903	300	400	375	375	....	....
DS-500 to 506	5100 to 5120	550	750	725	725	3000	....
DS-600 to 604	4600 to 4623, 4700 to 4703	825	1075	1050	....	4000	2075
DS-605, 606	4624 to 4633	900					
DS-607	4634 to 4645						

①DS-118 not permitted to operate between Union and West Napa.

Following nominal class engines not permitted to operate between Yountville and Larkmead:

DF-1 to 15, 109, 111, 304 to 307, 500 to 502, 600 to 621

Following nominal class engines not permitted to operate between Union and West Napa:

DF-1b, 2 to 5, 8 to 15, 600 to 621

UNLESS AUTHORIZED BY SUPERINTENDENT, ENGINES WILL NOT BE PERMITTED TO OPERATE IN THOSE TERRITORIES WHERE NO RATING IS SHOWN IN ENGINE RATING TABLE.

RATING OF ENGINES—In Units of 2000 Lbs. (Tons)

NOMINAL CLASS	ENGINE NUMBERS	Vallejo to Napa Jct. Elmira to Winters	Winters to Elmira	Winters and Esparto	Radum to San Ramon	San Ramon to Radum	Avon to San Ramon	San Ramon to Avon
DF-1 to 12	6138 to 6470, 8022 to 8305, except with 61:16 gear ratio with 60:17 gear ratio	....	....	....	....	....	....	....
DF-100	5200 to 5202	....	....	....	....	....	....	....
DF-101 to 108, 110, 112	4900 to 4902, 5203 to 5248, 5253 to 5278	3725	....	....	....	....	....	....
DF-109, 111	4903 to 4905, 5252	3350	....	....	....	....	....	....
DF-114, 116 to 118, 120 to 122, 124, 125	5279 to 5293, 5308 to 5335, 5339 to 5444, 5449 to 5493	2825	3275	....	....	....	....	....
DF-115, 119, 123, 126	5448, 5494 to 5507	....	....	....	....	....	....	....
DF-500, 501	4800 to 4815	....	....	....	....	....	....	....
DF-502	4816 to 4818	....	....	....	....	....	....	....
DF-602, 603, 605 to 607, 611, 612, 616	5600 to 5719, 5730 to 5844, 5872 to 5895	....	2850	....	....	....	....	....
DF-608 to 610, 613, 614, 615	5720 to 5729, 5845 to 5871	....	2850	....	....	....	....	....
DS-1 to 8	1000 to 1032	725	875	....	....	....	....	....
DS-9 to 12	1033 to 1090	....	....	....	....	....	....	....
DS-100 to 109, 111, 115 119	1300 to 1441, 1464 to 1485, 1514 to 1528, 1551 to 1567	1400	1650	....	....	....	....	....
DS-110, 114, 118	1442 to 1463, 1492 to 1513, 1539 to 1550	1400	....	....	....	....	....	....
DS-113, 117, 120 to 122	1486 to 1491, 1529 to 1538, 1568 to 1596	....	....	....	....	....	....	....
DS-200, 201	1900 to 1903	1020	1150	2475	1250	2650	975	2650
DS-500 to 506	5100 to 5120	975	1125	1800	1100	3000	....	....
DS-600 to 604	4600 to 4623, 4700 to 4703	1450	1725	....	....	....	....	....
DS-605, 606	4624 to 4633	....	....	....	....	....	....	....
DS-607	4634 to 4645	....	....	....	....	....	....	....

UNLESS AUTHORIZED BY SUPERINTENDENT, ENGINES WILL NOT BE PERMITTED TO OPERATE IN THOSE TERRITORIES WHERE NO RATING IS SHOWN IN ENGINE RATING TABLE.

SPECIAL INSTRUCTIONS—LATHROP SUBDIVISION

RULE 5. Time of arrival Tracy for first-class trains from Lathrop Subdivision will apply at Signal 721. Trains not pass this point ahead of designated time.

Time for freight trains at Tracy to and from Lathrop Subdivision will apply at clearance point to crossover west of Banta Road Crossing MP 73.5.

Freight trains arriving Tracy from Martinez and Niles subdivision must be clear of main track in advance of these times as prescribed by Rule 86.

RULE 14(k). Will not apply in CTC limits.

RULE 82-A. Trains to Western Division at Polk, originating at Sacramento, Roseville or Antelope, must obtain two clearances, one endorsed Sacramento Division, the other endorsed Western Division. Train orders addressed to such trains at Sacramento, Roseville or Antelope will apply the same as if addressed to them at Polk.

First-class trains to or from Western Division at Polk will assume the corresponding number and schedule at Polk without clearance.

Second-class trains and sections thereof, authorized on Western Division (Merced Subdivision) from Lathrop, may display indicators and signals, if any, as such schedule or section on Sacramento Division Roseville or Antelope to Polk and on Lathrop Subdivision Polk to Lathrop, operate as authorized by Rules D-97-A and D-251 Roseville or Antelope to Polk and Polk to Lathrop and register accordingly at Stockton.

Extra trains authorized at Stockton for movement on Merced Subdivision may leave Lathrop without clearance.

Regular trains from Merced Subdivision to Lathrop Subdivision may assume the corresponding number and schedule at Lathrop without clearance.

Second-class trains and sections thereof, authorized on Western Division (Merced Subdivision) to Lathrop and moving between Lathrop and Roseville, may display the same indicators and signals, if any, on Lathrop Sub-division Lathrop to Polk and on Sacramento Division Polk to Roseville, operate as authorized by Rules D-97-A and D-251 Lathrop to Polk and Polk to Roseville and register accordingly at Stockton and Roseville.

Trains authorized on Western Division at Tracy en route Merced Subdivision with same conductor and engineer are thereby authorized on Lathrop and Merced Subdivisions and are not required to obtain clearance at Lathrop.

Trains authorized at Fresno en route Lathrop Subdivision with same conductor and engineer are thereby authorized on both Merced and Lathrop Subdivisions and are not required to obtain clearance at Lathrop.

RULE 83. Sections of schedules authorized at Stockton for movement on Merced Subdivision need not ascertain that preceding sections of the same schedule have left Lathrop. A leading section must not permit a following section to pass between Stockton train-order office and junction switch Lathrop except as provided by last paragraph of Rule 85.

Identification may be made by westward trains between Stockton and Lathrop to be applied at Lathrop on Merced Subdivision. Reduce speed sufficiently to permit identification and comply with Rule 14(k).

RULE 83-A. At the following stations only trains indicated will register:

Sacramento...Trains originating or terminating.
Extra trains will register at Stockton.

RULE 83-B. At open train-order offices trains may register by ticket as follows:

Stockton.....All trains, except trains originating or terminating.

RULE 93. Yard limits in which the provisions of Rule 93 will apply, except within CTC limits, are established at the following points:

Second and inferior class trains, extra trains and engines are not required to clear or protect against first-class trains within yard limits where Rule D-251 is applicable.

West MP		East MP
78.50	Tracy (Martinez-Los Banos line)	85.64
66.50	“ (Niles-Lathrop line)	74.37
79.50	Lathrop (Tracy-Stockton line)	83.04
	“ (Merced line)	94.29
85.07	Stockton	93.72
	“ (Oakdale Branch)	End of track
101.57	Lodi	104.25
	“ (Kentucky House Branch)	End of track
	“ (Woodbridge Branch)	End of track
111.10	Galt	113.21
	“ (Ione Branch)	End of track
85.51	Sacramento	95.35
131.60	“ (Stockton line)	136.33

Oakdale: Trains and engines must move with caution between F and G Sts. expecting to find main track occupied by Sierra Ry trains or engines.

RULE D-97-A. Will apply between MP 81.24 and MP 92.2.

RULE 98. Railroad crossings at grade not interlocked:

Trains and engines must approach with caution, and may move over the following crossings without stopping, if crossing clear and no movement approaching on intersecting line:

Stockton...CCTCo., crossing of Oakdale Branch near MP 92.0,

Stop clear of the following crossings, then proceed if no movement approaching on intersecting line:

Brandywine. CCTCo., crossing of Kentucky House Branch,
Oakdale.....AT&SFRy, crossing of Oakdale Branch, MP 116.7 on Ione
Branch...CCTCo., crossing of Ione Branch.

Drawbridge not interlocked:

Stockton: AT&SFRy. crossing on connection to SPB-Ry. at Church and Edison Streets:

Stop not less than 10 feet nor more than 50 feet from crossing, then proceed (if no movement approaching on intersecting line). During fog, inclement weather or obscured visibility member of crew must flag through crossing after ascertaining there is no movement on conflicting route.

RULE 99-A. Lathrop: Third paragraph will not apply to crews of Nos. 53 and 54 and Trains 51 and 52 within interlocking limits or between interlocking zones.

RULE 103-A. Automatic crossing gates:

Following crossings protected by gates, with control circuits located within short distance of crossings.

Crews of trains or engines making stop, reverse movements, movements against the current of traffic or movements from yard tracks over crossings, must know that gates are down and crossings clear of vehicular traffic before entering crossings.

Station	Location	MP
Tracy	Central Ave.	70.8
Tracy	Banta Road	73.6
Stockton	McKinley Ave.	87.8
Stockton	Hazelton Ave.	90.5
Stockton	Church Street	90.6
Stockton	Lafayette Street	90.7
Stockton	Market Street	90.9
Stockton	Main Street	90.95
Stockton	Weber Avenue	91.0
Need	Twin Cities Road	114.5

Public Utilities Commission orders prohibit operation of train, engine, motor or car over the following crossings unless first brought to a stop and traffic on the highway protected by a member of the crew:

Lodi............Crossing Oak St. (D-103.25) and Pine St. (D-103.3) on yard tracks,
Tomspur.........Crossing on Aaron Canning Co. spur, D-98.1,
Woodbridge.....Crossing Woodbridge road on General Mills spur, DE-105.3-C,
Carbondale.......Crossing County road when on industry track, DG-132.1.

Trains moving under provisions of Rules 771 and 776 or operating on Winery spur must not enter crossing at MP 105.1 Woodbridge Road, until protection has been afforded by a member of the crew, or it is known that automatic warning devices are operating.

RULE 104. The normal position of rigid switches at the end of double track and at junctions, is as follows:

Lodi.........Woodbridge Branch, for Lathrop line,
Lodi.........Yard track for Kentucky House Branch.

RULE 104-A. Tracy:
Westward freight trains approaching east end Tracy Yard must run expecting to find main track switch lined for movement into yard tracks.

RULE 105. Lathrop: Westward siding extends from MP 82.44 to MP 81.61.

RULE 204. Trains of Lathrop or Merced Subdivision, with the same conductor and engineer operating through Lathrop may be issued train orders on one subdivision that affect their movement on the other, or both subdivisions.

RULE 221. Trains operating Clements and beyond on Kentucky House Branch must obtain clearance at Lodi OK'd by Chief Train Dispatcher.

RULE D-251. Will apply as follows:
On eastward track: Lathrop to MP 92.2.
On westward track: MP 92.2 to MP 81.24.

RULE 286. Distant signals installed on sidings 2000 feet in advance of absolute signal governing movement out of CTC controlled sidings. When such signals display yellow aspect, train may proceed on siding not exceeding restricted speed, expecting to find siding occupied by preceding train.

Trains or engines from Oakdale Branch must not pass Signal D-913 displaying yellow aspect without permission from yardmaster at Stockton. Cars or engines must not be left on approach circuit which extends 500 feet in advance of Signal D-913.

RULE 291. El Pinal: FLASHING YELLOW aspect on eastward absolute signals west of WP RR crossing on eastward track governs switching movements to eastward or westward main track.

FLASHING YELLOW aspect on westward absolute signal 1000 feet east of WP RR crossing on westward track governs switching movements to westward track.

Lathrop: Flashing yellow lights on eastward signal at west junction switch and westward signals at west junction switch on Fresno Line and Westward Main.

RULE 306. The following block signals equipped with triangular plate bearing the letter "P" have included in their control limits some special protective device. Absolute signals are listed as "P-A", "P-SA" or "P-I".

Eastward Signal	Protection	Westward Signal
P-710	Spring switch, junction to Los Banos line, Tracy........	
	Spring switch to yard, Tracy........	P-829
	Spring Switch to Freight Lead, MP 75.9	P-SA
	Spring switch, Stockton wye........	P-I

RULE 505. AUTOMATIC BLOCK SIGNAL SYSTEM

Tracy: Top unit of Signal P-710 governs movements toward Lathrop. Bottom unit governs movement toward Los Banos.

Signals 713, 825 and 827 are approach clearing. Signal 713 will revert to stop position when 600-ft. track circuit in front of station building is occupied for approximately four minutes. A second approach circuit is located 185 feet east of MacArthur Blvd. to clear Signal 713 for movements to continue.

Approach circuit to Signal 825 on Track No. 1 begins 185 feet east of MacArthur Blvd.

Approach circuit sign is north of main track 185 feet east of MacArthur Blvd.

Top unit of Signal P-829 governs movements on main track. Bottom unit governs movements to yard.

Signals 716 and 723 on Track No. 1 at crossover near MP 72 govern movements over crossovers to enter main track only. These signals will not be lighted when crossovers are lined normal. Time circuits are provided to cut out west control of Signal 716, 2 minutes and 40 seconds after crossover is lined; east control of Signal 723, 6 minutes and 10 seconds after crossover is lined; and west control of 736, 5 minutes and 20 seconds after crossover is lined. If signals fail to clear at expiration of time interval, Rules 509 and 510 will govern.

Top unit of Signal 735 governs movements on main track. Bottom unit governs movements into yard over crossover.

Top unit of Signal 736 on Track No. 1 governs movements to the freight lead. The center unit governs movements to the main track. The bottom unit, when displaying a lunar light governs movements to the Freight Lead per Rule 289.

Eastward trains moving on main track must not pass Signal 734 and eastward trains entering main track through crossover MP 73.5 must not pass Signal 736 until signal governing movement displays proceed indication or permission obtained from Train Dispatcher. When Signal 734 displays proceed indications, eastward trains on main track may proceed to Centralized Traffic Control limits MP 75.81, and when Signal 736 displays proceed indication, eastward trains entering main track through crossover are authorized to enter main track and proceed to Centralized Traffic Control limits MP 75.81, without timetable or train order authority and regardless of superiority of trains.

When westward P-SA Signal at MP 75.9 displays proceed indication, westward trains are authorized to proceed on main track to Signal 735, Tracy Yard, without timetable or train order authority and regardless of superiority of trains.

RULE 505. AUTOMATIC BLOCK SIGNAL SYSTEM—PUSH BUTTONS.

Tracy: Push buttons are located on Signal 827 on Los Banos line, and instrument case east of MacArthur Blvd. on Lathrop line to clear signals over junction switch.

Push buttons are located on instrument case opposite Signals 828 and 826, Los Banos line, west of spring switch to yard.

RULE 535. SPRING SWITCHES

Spring switches equipped with facing point locks are located as follows:

Location		Normal Position
Tracy........	Junction switch MP-71.16 to Los Banos line..............	Lathrop Subdivision
Banta........	MP 75.9 Freight Lead to Main Track..........	Main Track

Spring switches not equipped with facing point locks are located as follows:

Location		Normal Position
Tracy........	MP-82.98 Los Banos Main to yard........	Yard Track
*Stockton.....	West Leg of Wye..........	West Leg of Wye

*Has ground throw switch stand below plate at switch. Not equipped with target bearing letters "SS"

RULE 605. INTERLOCKING

Tracy: Limits extend from westward SA Signal at MP 70.68 to eastward SA Signal at MP 70.64 on the Niles line and to eastward SA Signal at MP 82.18 on the Martinez line.

Interlocking portion of SA signals will be controlled by the Tracy telegraph operator.

SPECIAL INSTRUCTIONS—LATHROP SUBDIVISION

Stockton: AT&SF Crossing Sacramento and Taylor Streets:

Limits of Stockton Tower No. 2 have been extended to include that portion of main track, siding, and crossovers on the AT&SF Railway to Commerce Street and signal indications will supersede the superiority of train in both directions on both tracks. The movement of trains and engines in this territory under the control of Stockton Tower No. 2, who may issue instructions as required and must be advised in advance of any known condition that will delay the train or engine or prevent it from making usual speed.

Speed limit between Stockton Tower No. 2 and Commerce Street is 20 MPH. Through turnouts and crossovers—12 MPH.

Following fixed signals and indications are effective in above specified territory:

RED.........................Stop and communicate with Stockton Tower No. 2 for instructions.
FLASHING RED......Proceed prepared to stop short of train, obstruction or switch not properly lined, but not exceeding 20 MPH.
RED OVER YELLOW..Same as flashing red.

S. P. movements entering AT&SF interlocking limits at Commerce Street may disregard the letter A on signal governing entrance thereto as it applies to WP movements only.

Following whistle signals will be observed at Stockton Tower No. 2:

From SP to AT&SF enroute Commerce Street... o - o.
For Middle Track.................................. o - -.
For Old Siding..................................... - - o o.
For Westbound Main Track...................... o o - -.
For Eastbound Main Track........................ - o -.

Enginemen of eastward trains that are to make through movement without stopping at Stockton Yard will sound whistle signal – – – 0 – – – while approaching Signal 876 east of W. P. Railroad crossing French Camp.

Stockton: WPRR crossing Weber Avenue and Union St.: Signals governing movements over WPRR track at MP 91.00 are under control of WPRR train dispatcher. When signals governing movement over crossing display stop indication after approach circuit is occupied or if signal governing movements out of Building Materials Distributors spur does not display proceed indication after switch and derail have been lined, a member of crew must contact WPRR train dispatcher for permission and instructions to operate push button time release.

Eastward trains via Oakdale Branch must not leave yard until authorized by yardmaster or his representative.

Polk: West switch and eastward signals operated by signal operator at Elvas, and their use governed by Sacramento Division special instructions.

RULE 680. AUTOMATIC INTERLOCKING

French Camp, WPRR Crossing MP 87.85: Interlocking limits, interlocking signals 500 feet west of and 430 feet east of WP crossing on eastward main track. Interlocking signals 430 feet east of and 380 feet west of WP crossing on westward main track. Interlocking signals 240 feet west of and 210 feet east of WP crossing on the drill track.

RULE 760. CENTRALIZED TRAFFIC CONTROL

Lathrop: Limits extend from eastward absolute signals at MP 75.81 on Tracy Line and westward absolute signal at MP 82.15 on Stockton Line to westward absolute signal MP 199.32, Biola Junction.

Eastward 3 unit signal, MP 81.30 (at west junction switch) governs movements as follows:

Top unit............eastward main track
Center unit..........Merced Subdivision
Bottom unit.........westward main track
Flashing yellow, Rule 291.........westward main track or Merced Subdivision

Westward 3 unit signal, MP 82.15, governs movements as follows:

Top unit............westward main track
Center unit.........Merced Subdivision
Bottom unit........eastward main track

Stockton-Polk: Limits extend from signal 650 feet west of WP RR crossing, MP 92.30 to interlocking signal just west of west switch at Polk.

On the double track between west limits of CTC and east end of Akers, movements may be made in either direction on either main track being governed by block signal indication and Rules 509 or 510 as applied to single track will apply to both tracks.

El Pinal: Movements across WP RR MP 92.30 under control of SP train dispatcher at Bakersfield.

When absolute signals governing movements over crossing display "STOP" indication, member of the train crew must contact train dispatcher by telephone for instructions.

If signal cannot be cleared and there is no train approaching from either direction of WP RR, train dispatcher may authorize member of crew to operate push button time release in box marked "SP" located near the crossing as follows:

Press button until amber light is illuminated, then release.
After interval of 5¾ minutes, red light should be illuminated, indicating time release has functioned and WP RR crossing is clear of conflicting trains.
If absolute signal does not then indicate proceed, train may proceed over WP RR crossing under provisions of Rule 776 without providing flag protection on WP RR.
If absolute signal does not display proceed indication and red light is not illuminated in push button box after time release actuated, train may proceed only as provided by Rules 663(c) and 776.

Instructions for operating emergency push buttons are posted in box marked "SP" at the crossing.

Crossover switches are dual control switches and when necessary to hand throw these switches, Rules 771 and 772 will apply.

RULE 781. White light which may appear on side of relay housing is maintainer's call light, but when train has been stopped by an absolute signal and white light is observed burning, member of crew will communicate with train dispatcher, even though another train may be seen approaching.

GENERAL REGULATIONS

RULE 825. Tracy: All freight trains entering Tracy Yard will tie no less than three hand brakes on the east end unless instructed otherwise by Yardmaster.

Train crews must not release brakes on outbound trains until engine is coupled and brake pipe charged.

RULE 827. Tracy: Passenger trains except No. 51 and 52 and trains consisting entirely of passenger equipment must approach Tracy at speed not exceeding 8 MPH to allow forward brakeman to detrain on station side, where rear of train will stop. He will make rolling inspection of train, then walk length of train on opposite side, making standing inspection, giving careful attention to running gear and journal boxes and entrain on station side.

Lathrop: Train No. 51 will be governed by the following: After stopping at Lathrop, forward brakeman will detrain and walk around entire train, making standing inspection, giving careful attention to running gear and journal boxes and entrain on station side.

Train No. 52 will be governed by the following:

Approach Lathrop at speed not exceeding 8 MPH to allow forward brakeman to detrain on engineer's side, where rear of train will stop. He will make rolling inspection of train, then walk length of train on opposite side, making standing inspection, giving careful attention to running gear and journal boxes and entrain on station side.

RULE 830.

Tracy: Trains 51, 52, 53 and 54 will make station stop at station (Lathrop Line), clearing MacArthur Boulevard.

Trains 57 and 58 will make station stop at Station (Los Banos Line).

Lodi: Through freight trains picking-up or setting out will be governed as follows:

Westward trains must stop at Hill Signal east of yard and detach engine.

Eastward trains when consist does not exceed 75 cars will stop to clear Tokay Street and detach engine. When consist exceeds 75 cars, train must stop west of west switch of siding and detach engine.

Trains with consist in excess of 75 cars and using controlled siding must arrange to immediately cut street crossings.

AIR BRAKE RULES

RULE 17. Retaining valves must be used on freight and mixed trains without dynamic brakes in operation on descending grades as follows:

Toyon to ½ mile east of Valley Spring ....1 retaining valve for every 75 tons in train.

MP 129 to Helisma ...1 retaining valve for every 85 tons in train.

Freight and mixed trains with dynamic brakes in operation and handling over 800 tons must use retaining valves as follows:

Toyon to ½ mile east of Valley Springs.....1 retaining valve for each 100 tons in train.

MP 129.00 to Helisma.1 retaining valve for each 125 tons in train.

FREIGHT TRAINS

RULE 22. Tracy: Trainmen must not couple air hose on outgoing trains at Tracy until train is made up and caboose and road engine are on train. Coupling caboose and road engine to train will be considered as an indication that the train is made up and switchmen have completed their work. Switchmen must not perform switching on or couple other cars to a train on which the caboose and road engine have been attached, without instructions from the yardmaster, who will see to it that members of the crew are notified in advance.

RULE 25. Will apply at Toyon.

RULE 33. When gross tonnage of freight train handling cars with single capacity brakes exceeds 80 tons per operative brake, maximum speed of train must not exceed 45 MPH, except when gross tonnage exceeds 85 tons per operative brake, maximum speed must not exceed 25 MPH on descending grades of 1.2% to 1.5% and 20 MPH on descending grades in excess of 1.5%. Grades where such restrictions apply will be:

KENTUCKY HOUSE BRANCH

Maximum speed of freight trains must not exceed 20 MPH on descending grades when gross tonnage exceeds 85 tons per operative brake.

Eastward	Westward
MP 135.0 to MP 137.5	MP 120.0 to MP 135.0
	MP 137.5 to MP 142.84

MISCELLANEOUS

11. Load limit (car and contents):

**Tracy-Polk	263,000 pounds
Stockton-Montpellier	240,000 pounds
Woodbridge-Kentucky House	240,000 pounds
*Galt-Ione	240,000 pounds

*When notified that false bents are not in place on bridges 135.87 and 136.64, load limit between Edwin and Ione will be 169,000 pounds, except that passenger equipment on six axles weighing not over 200,000 pounds may be handled.

**Cars SP 463000 through 463499, maximum gross load per car is 260,000 pounds when operated in series.

Unless authorized by Superintendent, heavier loads must not be handled.

13. LOCATION OF STOCK YARDS

Station	Capacity in cars
Elk Grove	9 (Water)
Peters	12 (Water)
Adela	15 (Water)
Oakdale	16 (Water)
Claribel	18 (Water)
Clay	8
Clements	10

30.

LOCATION OF OVERHEAD AND SIDE STRUCTURES NOT STANDARD CLEARANCE ON MAIN TRACK AND SIDINGS

Mile Post	At or Near	Description	
104.3	Lodi	Mokelumne River bridge	Side
136.7	Dagon	Sutter Creek bridge	Overhead & side

SPECIAL INSTRUCTIONS—LATHROP SUBDIVISION

SPEED RESTRICTIONS FOR TRAINS: Maximum speed of trains in territory shown below is subject to further restrictions applicable to engines in the train as shown in SPEED RESTRICTIONS FOR ENGINES appearing on page 5 and MAXIMUM SPEED PERMITTED WITH CERTAIN EQUIPMENT, and OTHER MAXIMUM SPEEDS appearing on page 6 of Special Instructions for All Subdivisions. Speed must be further reduced as prescribed by speed signs, except as specifically authorized by Special Instructions herein, or by timetable bulletin.

All trains must run carefully during and after heavy storms, particularly when the track is apt to be affected. When fog, storms or other conditions obscure track or signals, speed of trains must be so reduced as to permit strict observance of signals and INSURE SAFETY REGARDLESS OF TIME.

TERRITORY	PASSENGER TRAINS	FREIGHT AND MIXED	LIGHT ENGINES
MP MP Column:	1	2	3
EASTWARD, TRACY TO POLK:			
71.16 to 72.25	35	35	35
72.25 to 81.39	79	60	70
Thru switches and crossovers at Lathrop.	25	25	25
81.39 to 89.65	70	60	70
89.65 to 90.40	70	45	70
★90.40 to 91.40 (Stockton)	20	20	20
91.40 to 95.00	70	60	70
95.00 to 95.01 (thru turnout)	60	60	60
95.01 to 101.25	70	60	70
101.25 to 102.00	70	55	70
102.00 to 103.65	30	30	30
103.65 to 132.00	70	60	70
EASTWARD, STOCKTON TO MONTPELLIER:			
★90.95 to 93.10 (Stockton)	..	12	12
93.10 to 122.20	..	40	40
122.20 to 140.29	..	30	30
EASTWARD, LODI TO KENTUCKY HOUSE:			
103.51 to 121.40	..	30	30
121.40 to 132.30	..	25	25
132.30 to 139.70	..	15	15
139.70 to 142.84	..	25	25
EASTWARD, LODI TO WOODBRIDGE:	..	25	25
EASTWARD, GALT TO IONE:			
112.12 to 122.40	..	49	49
★122.40 to 138.99, except	..	30	30
Over structures No. 135.87 and 136.64	..	20	20

TERRITORY	PASSENGER TRAINS	FREIGHT AND MIXED	LIGHT ENGINES
MP MP Column:	1	2	3
WESTWARD, POLK TO TRACY:			
132.00 to 104.40	70	60	70
104.40 to 103.65	70	55	70
103.65 to 102.00	30	30	30
102.00 to 95.01	70	60	70
95.01 to 95.00 (Thru turnout)	60	60	60
95.00 to 91.40	70	60	70
★91.40 to 90.40 (Stockton)	20	20	20
90.40 to 81.39	70	60	70
Thru switches and crossovers at Lathrop.	25	25	25
81.39 to 72.25	79	60	70
72.25 to 71.16	35	35	35
WESTWARD, MONTPELLIER TO STOCKTON:			
140.29 to 122.30	..	30	30
122.30 to 122.20	..	10	10
122.20 to 93.10	..	40	40
★93.10 to 90.95 (Stockton)	..	12	12
WESTWARD, KENTUCKY HOUSE TO LODI:			
142.84 to 139.70	..	25	25
139.70 to 132.30	..	15	15
132.30 to 121.40	..	25	25
121.40 to 103.51	..	30	30
WESTWARD, WOODBRIDGE TO LODI:	..	25	25
WESTWARD, IONE TO GALT:			
★138.99 to 122.40, except	..	30	30
Over structures No. 136.64 and 135.87	..	20	20
122.40 and 112.12	..	49	49

★Regulated by City ordinance.

Freight and mixed trains containing no restricted cars are authorized to operate at Column 1 speeds not exceeding 60 MPH (65 MPH between Stockton and Polk) consistent with local restrictions account grade and other conditions, provided trains:

1. Do not exceed 120 cars and 40 tons per operative brake; or,
2. When carrying 90 lbs. brake pipe pressure, do not exceed:

Number of Cars	Tons Per Operative Brake
70	60
75	59
80	58
85	57
90	56
95	55
100	54
105	53
110	52
115	51
120	50

On Oakdale Branch between locations shown below maximum speed must not be exceeded when handled by following engines subject to further restrictions shown in Speed Restrictions for Trains table above.

MP 90.96 and MP 125.60	
DF 12, 15, 608, 609, 619	25 MPH
DF 4, 10, 11, 13, 14, 600 to 607, 610 to 618, 620, 621	30 MPH
DF 3, 9	35 MPH
MP 125.60 and MP 140.28	
DF 12, 15, 608, 609, 619	25 MPH

On Kentucky House Branch between MP 130.20 and MP 136.90 maximum speed must not be exceeded when handled by following engines subject to further restrictions shown in Speed Restrictions for Trains table above.

DF 12, 15, 608, 609, 619	15 MPH
DF 4, 10, 11, 13, 14, 600 to 604, 606, 617, 618, 620, 621	20 MPH

SPEED RESTRICTIONS FOR IONE BRANCH....................See Page 31
SPEED RESTRICTIONS FOR OTHER THAN MAIN TRACKS....................See Page 31

RATING OF ENGINES—In Units of 2000 Lbs. (Tons)

NOMINAL CLASS	ENGINE NUMBERS	Tracy and Polk	Stockton to Montpellier	Montpellier to Stockton	Lodi to Wallace Toyon to MP 139.0	Wallace to Toyon MP 139.0 to Kentucky House	MP 139.0 to Toyon	Valley Spring to MP 129
DP-4, 7, 12	6000 to 6004, 6017, 6018, 6046 to 6054, 5900 to 5909, 5916, 5917	3400	....	....	....	....	....	....
DP-5, 6, 8 to 11	6005 to 6016, 6055 to 6064, 5910 to 5915, 6019 to 6045, 5918 to 5924	3425	....	....	....	....	....	....
DP-13	6067 to 6068	....	....	....	....	....	....	....
DF-1 to 12	6138 to 6470, 8022 to 8305, except	3750	....	....	....	....	....	....
	with 61:16 gear ratio	....	....	....	....	....	....	....
	with 60:17 gear ratio	3000	....	....	....	....	....	....
DF-100	5200 to 5202	....	....	....	....	....	....	....
DF-101 to 108, 110, 112	4900 to 4902, 5203 to 5248, 5253 to 5278	5000	3700	5000	3900	1000	1650	2600
DF-109, 111	4903 to 4905, 5250 to 5252	5000	4000	5000	4200	1225	1800	2825
DF-114, 116 to 118, 120 to 122, 124, 125	5279 to 5293, 5308 to 5335, 5339 to 5444, 5449 to 5493	6500	4375	6000	....	....	....	....
DF-115, 119, 123, 126	5448, 5494 to 5507	7300	5025	6775	....	....	....	....
DF-127	7000 to 7020	7700	....	....	....	....	....	....
DF-500, 501	4800 to 4815	....	....	....	....	....	....	....
DF-502	4816 to 4818	5900	....	....	....	....	....	....
DF-602, 603, 605 to 607, 611, 612, 616	5600 to 5719, 5730 to 5844, 5872 to 5895	3950	....	....	....	....	....	....
DF-608 to 610, 613, 614, 615	5720 to 5729, 5845 to 5871	4050	2850	3800	3000	775	1300	2000
DF-800	9000 to 9002	7625	....	....	....	....	....	....
DS-1 to 8	1000 to 1032	1625	1350	1850	1150	300	450	775
DS-9 to 12	1033 to 1090	....	....	....	....	....	....	....
DS-100 to 109, 111, 115 119	1300 to 1441, 1464 to 1485, 1514 to 1528, 1551 to 1567	2450	2125	2850	2250	550	950	1450
DS-110, 114, 118	1442 to 1463, 1492 to 1513, 1539 to 1550	3200	....	....	2275	550	950	1475
DS-113, 117, 120 to 122	1486 to 1491, 1529 to 1538, 1568 to 1596	....	....	....	....	....	....	....
DS-200, 201	1900 to 1903	....	....	....	....	....	....	....
DS-500 to 506	5100 to 5120	2000	....	....	1475	400	575	975
DS-600 to 604	4600 to 4623, 4700 to 4703	3250	2250	3025	....	....	....	....
DS-605, 606	4624 to 4633	3600	....	....	....	....	....	....
DS-607	4634 to 4645	....	....	....	....	....	....	....

UNLESS AUTHORIZED BY SUPERINTENDENT, ENGINES WILL NOT BE PERMITTED TO OPERATE IN THOSE TERRITORIES WHERE NO RATING IS SHOWN IN ENGINE RATING TABLE.

On Ione Branch between locations shown below maximum speed must not be exceeded when handled by following engines subject to further restrictions shown in SPEED RESTRICTIONS FOR TRAINS TABLE on Page 30.

MP 122.13 to MP 122.40

DF 12, 15, 608, 609, 619	30 MPH
DF 606, 617, 620	35 MPH
DF 4, 10, 11, 13. 14, 600 to 605, 607, 610 to 616, 618	40 MPH
DF 1b, 2, 3, 5, 8, 9, 16	45 MPH

MP 136.10 to MP 122.40

DF 12, 15, 608, 609, 619	25 MPH

SPEED RESTRICTIONS FOR OTHER THAN MAIN TRACKS	With Caution Not Exceeding MPH
Through sidings, yard and other tracks, wyes, balloon tracks, crossovers and turnouts, except:	**15**
Through slip switches	**10**
Through turnouts on other than sidings	**10**
On branches	**10**
★On all yard tracks within city limits, Stockton	**12**
Through controlled sidings in CTC, except:	**30**

★Regulated by City ordinance.

SPECIAL INSTRUCTIONS—LATHROP SUBDIVISION

RATING OF ENGINES—In Units of 2000 Lbs. (Tons)

NOMINAL CLASS	ENGINE NUMBERS	Kentucky House to MP 139.0 Toyon to Valley Spring MP 129 to Lodi	Lodi and Woodbridge	Galt to Edwin	Edwin to Ione	Ione to Edwin	Edwin to Galt
DF-100	5200 to 5202	....	....	....	....	....	....
DF-101 to 108, 110, 112	4900 to 4902, 5203 to 5248, 5253 to 5278	5000	4100	2350	①5000	①5000	5000
DF-109, 111	4903 to 4905, 5252	....	....	....	....	....	....
DF-114, 116 to 118, 120 to 122, 124, 125	5279 to 5293, 5308 to 5335, 5339 to 5444, 5449 to 5493	10000	4625	2450	①5300	①10000	10000
DF-115, 119, 123, 126	5448, 5494 to 5507	10000	5175	....	....	....	....
DF-500, 501	4800 to 4815	....	....	....	....	....	....
DF-502	4816 to 4818	....	....	....	....	....	....
DF-602, 603, 605 to 607, 611, 612, 616	5600 to 5719, 5730 to 5844, 5872 to 5895	....	....	1700	①3450	①10000	10000
DF-608 to 610, 613, 614, 615	5720 to 5729, 5845 to 5871	10000	2925	1750	①3550	①10000	10000
DS-1 to 8	1000 to 1032	4000	1100	775	①1725	①4000	4000
DS-9 to 12	1033 to 1090	....	....	....	....	....	....
DS-100 to 109, 111, 115 119	1300 to 1441, 1464 to 1485, 1514 to 1528, 1551 to 1567	4000	....	1250	①1250	①4000	4000
DS-110, 114, 118	1442 to 1463, 1492 to 1513, 1539 to 1550	4000	....	1675	①1675	①4000	4000
DS-113, 117, 120 to 122	1486 to 1491, 1529 to 1538, 1568 to 1596	....	....	....	....	....	....
DS-200, 201	1900 to 1903	....	....	....	....	....	....
DS-500 to 506	5100 to 5120	3000	1450	825	1750	3000	3000
DS-600 to 604	4600 to 4623, 4700 to 4703	4000	2300	1300	①2850	①4000	4000
DS-605, 606	4624 to 4633	....	....	....	....	....	....
DS-607	4634 to 4645	....	....	....	....	....	....

①Not permitted to operate between Edwin and Ione when notified false bents are not in place on bridges 135.87 and 136.64.

UNLESS AUTHORIZED BY SUPERINTENDENT, ENGINES WILL NOT BE PERMITTED TO OPERATE IN THOSE TERRITORIES WHERE NO RATING IS SHOWN IN ENGINE RATING TABLE.

RULE 82-A. Second-class trains and sections thereof, authorized on Western Division (Merced Sub-division) from Lathrop, may display indicators and signals, if any, as such schedule or section on Sacramento Division Roseville or Antelope to Polk and on Lathrop Sub-division Polk to Lathrop, operate as authorized by Rules D-97-A and D-251 Roseville or Antelope to Polk and Polk to Lathrop and register accordingly at Stockton.

Schedules and sections of schedules from Lathrop Subdivision to Merced Sub-division receiving clearance at Stockton endorsed "green signals" or "no signals" authorizes movement on Merced Sub-division. Trains will assume the corresponding number and schedule at Lathrop, display indicators and signals accordingly and may leave Lathrop without clearance.

Extra trains authorized at Stockton for movement on Merced Sub-division may leave Lathrop without clearance.

Regular trains from Merced Sub-division to Lathrop Subdivision may assume the corresponding number and schedule at Lathrop without clearance.

Second-class trains and sections thereof, authorized on Western Division (Merced Subdivision) to Lathrop and moving between Lathrop and Roseville, may display the same indicators and signals, if any, on Lathrop Subdivision Lathrop to Polk and on Sacramento Division Polk to Roseville, operate as authorized by Rules D-97-A and D-251 Lathrop to Polk and Polk to Roseville and register accordingly at Stockton and Roseville.

Crew ordered for No. 51 may assume schedule at Fresno without clearance.

Westward trains originating at Fresno Yard will obtain train orders, register and check register at Fresno Yard.

Trains authorized on Western Division at Tracy en route Merced Subdivision with same conductor and engineer are thereby authorized on Lathrop and Merced Subdivisions and are not required to obtain clearance at Lathrop.

Trains authorized at Fresno en route Lathrop Subdivision with same conductor and engineer are thereby authorized on both Merced and Lathrop Subdivisions and are not required to obtain clearance at Lathrop.

RULE 83. Sections of schedules authorized at Stockton for movement on Merced Subdivision need not ascertain that preceding sections of the same schedule have left Lathrop. A leading section must not permit a following section to pass between Stockton train-order office and junction switch Lathrop except as provided by last paragraph of Rule 85.

Identification may be made by westward trains between Stockton and Lathrop to be applied at Lathrop on Merced Subdivision; and by westward trains between Fresno and Fresno Yard to be applied at end of double track Fresno Yard. Reduce speed sufficiently to permit identification and comply with Rule 14(k).

RULE 83-A. Only trains originating or terminating will register at Modesto, Turlock and Merced.

Only trains terminating will register at Fresno Yard.

RULE 93. Yard limits in which the provisions of Rule 93 will apply are established at the following points:

West MP		East MP
206.04	Fresno (Pratton-Tulare line)	210.79
End of track	" (Biola-Porterville line)	208.15
199.07	" (Merced-Clovis line)	209.60

At Fresno Yard trains or engines will operate between MP 199.32 and MP 201.80 on signal indication, which indication will supersede superiority of trains between these points.

Fresno: When making movements against current of traffic, trains or engines must be preceded by flagman over railway and street crossings at grade where wigwags installed, protecting crossings during movement, except where crossing watchman located.

Eastward first-class trains, after passing Signal 2052 (west of Tuolumne St.), must proceed with caution and be prepared to cross to westward main track on signal from yardman.

When Signal 2046 on Pratton line, or Signal 2042 on eastward track displays stop indication train must stop, and after proceed signal received from yardman (green flag by day, green light by night) may then proceed as prescribed by Rules 509 and 513.

Eastward trains via Pratton line to Fresno Yard must receive proceed signal from yardman (green flag by day, green light by night) before fouling eastward or westward main track.

Fresno Yard: Trains entering or leaving yard tracks must receive proceed signal from yardman (green flag by day, green light by night), except within limits of diverging route signals.

RULE 103-A. Automatic crossing gates:

Following crossings protected by gates, with control circuits located within short distance of crossings.

Crews of trains or engines making stop, reverse movements, movements against current of traffic or movements from yard tracks over crossings, must know that gates are down and crossings clear of vehicular traffic before entering crossings.

Station	Location	MP
Manteca	Yosemite Street	96.7
Corell	Dakota St.	107.5
Arena	Arena Way	139.0
*Merced	"J" Street	150.8
Chowchilla	Robertson Blvd.	168.1
Biola Junction	Shaw Ave.	198.5

*Does not operate for movements from Poultry Producer's spur and Rule 103-A will apply.

Turlock: Switching must not be done over Main and Olive Street crossings between hours of 12 Noon and 1:00 PM.

Madera: Automatic warning devices at Yosemite Ave. and Sixth St., do not apply to back track which serves Valley Feed & Fuel Co.

At the following locations, trains moving under the provisions of Rules 771 and 776 must not enter the crossing until protection for vehicular traffic has been afforded by a member of the crew, or it is known that automatic warning devices are operating:

Station	Location	MP
Lathrop	Lathrop Road	82.1
Modesto	Butchertown Spur	114.7
Ceres	West Siding Switch (Center St.)	117.3
Turlock	Fulkerth Road	124.9
Arena	West Siding Switch (Arena Way)	139.0
Merced	"D" Street	151.3
Chowchilla	West Siding Switch (King St.)	168.0
Chowchilla	West Siding Switch (Robertson Blvd.)	168.1
Biola Jct.	Biola Branch (Old Highway 99)	208.5

Public Utilities Commission orders prohibit operation ot train, engine, motor or car over the following crossings unless first brought to a stop and traffic on the highway protected by a member of the crew:

Salida.......Broadway St. crossing for any movement that does not operate wigwag, B-106.4,
Modesto.....Tully Ave., on Grange Co. spur, B-112.25-C,
Modesto.....B St. on Shoemaker spur, B-113.55-C,
Chowchilla...Highway crossing and Robertson St., on Standard Oil Co. spur, B-168.11-C,

RULE 104. The normal position of rigid switches at the end of double track and at junctions, is as follows:

Fresno Yard..End double track, for westward track,
Fresno.......Pratton line, for eastward main track.

RULE 105. Manteca Track No. 1 extends from MP 96.73 to MP 97.72.

Calla siding extends from MP 97.74 to MP 99.44, is CTC controlled siding, capacity 171 cars. Crossover at west end Calla siding is equipped with dual control switch machines.

Westward absolute siding signal at west end Calla siding is three unit signal.

Top unit governs movements to Manteca Track No. 1.

Center unit governs movement to main track.

Lower unit, when displaying lunar aspect, governs movements to Manteca Track No. 1 per Rule 289.

West Modesto: Siding extends from MP 110.33 to MP 111.34.

Modesto: Siding extends from MP 112.78 to MP 113.68.

Siding at Modesto for use only by first-class trains, light engines and local freight trains. May be used by other trains only when instructed by train dispatcher. Freight trains occupying this siding must not block street or highway crossings.

RULE 204. Trains of Lathrop or Merced Subdivision, with the same conductor and engineer operating through Lathrop may be issued train orders on one subdivision that affect their movement on the other, or both subdivisions.

RULE 221. Madera is train order office for Train No. 51 only.

Fresno is train order office only between 11:00 P.M. and 8:00 A.M. daily.

RULE 286. Distant signals installed on sidings 2000 feet in advance of absolute signal governing movement out of CTC controlled sidings. When such signals display yellow aspect, train may proceed on siding not exceeding restricted speed, expecting to find siding occupied by preceding train.

RULE 289. Biola Junction: When lunar aspect is displayed in lower unit, trains may proceed on freight lead extension without stopping at restricted speed, expecting to find freight lead extension occupied by a preceding train.

RULE 291. Lathrop: Flashing yellow light governs movements to east or west leg of wye at Fresno of wye.

RULE 306. The following block signals equipped with triangular plate bearing the letter "P" have included in their control limits some special protective device. Absolute and interlocking signals are listed as P-A, P-SA or P-1:

Eastward Signal	Protection	Westward Signal
P-1972	Spring Switch, Crossover Biola Jct.	P-A

RULE 535. SPRING SWITCHES

Spring switches not equipped with facing point lock:

Location		Normal Position
Biola Jct.	East Switch of Crossover west end No. 1 Drill Track	Freight Lead

RULE 705. LETTER TYPE INDICATORS

Indicators located as follows:

Illum. Letter	On Signal	Approaching	Authorizes and Requires Movement as Follows:
S	post at east switch Covell	West Modesto	Take siding at West Modesto
S	Absolute Signal MP 114.9	Modesto	Take siding at West Modesto

RULE 760. CENTRALIZED TRAFFIC CONTROL

Limits extend from eastward absolute signals at MP 75.81 on Tracy Line and westward absolute signal at MP 82.15 on Stockton Line, to westward absolute signal MP 199.32 Biola Junction, and are under control of Train Dispatcher at Bakersfield.

Lathrop: Eastward 3 unit signal MP 81.30 (west junction switch) governs movements as follows:

Top unit	eastward main track
Center unit	Merced Subdivision
Bottom unit	westward main track
Flashing yellow, Rule 291	westward main track or Merced Subdivision.

Westward 3 unit signal MP 82.15 governs movements as follows:

Top unit	westward main track
Center unit	Merced Subdivision
Bottom unit	eastward main track

Movements across WP RR MP 93.72 under control of SP train dispatcher.

When absolute signals governing movements over crossing display "STOP" indication, member of the train crew must contact train dispatcher by telephone for instructions.

If signal cannot be cleared and there is no train approaching from either direction of WP RR, train dispatcher may authorize member of crew to operate push button time release in box marked "SP" located near the crossing as follows:

Press button until amber light is illuminated, then release. After interval of 6½ minutes, red light should be illuminated, indicating time release has functioned and WP RR crossing is clear of conflicting trains.

If absolute signal does not then indicate proceed, train may proceed over WP RR crossing under provisions of Rule 776 without providing flag protection on WP RR.

If absolute signal does not display proceed indication and red light is not illuminated in push button box after time release actuated, train may proceed only as provided by Rules 663(c) and 776.

Instructions for operating emergency push buttons are posted in box marked "SP" at the crossing.

Modesto: Movements across TS Ry., MP 114.70, on main track and MP 114.92 on Butchertown spur under control of SP Train Dispatcher.

When absolute signals governing movements over crossing display stop indication, member of train crew must contact Train Dispatcher by telephone for instructions.

Absolute signals on Butchertown spur will not display proceed indication unless main track switch is lined for movement to Butchertown spur.

If signal cannot be cleared for main track or Butchertown movements and there is no train approaching from either direction on TS Ry., Train Dispatcher may authorize member of crew to operate push button time release in box marked "SP" located near the crossing as follows:

Movements on Main Track

Press push button until amber light is illuminated, then release. After interval of 6 minutes, red light should be illuminated, indicating time release has functioned and TS Ry. crossing is clear of conflicting trains.

If absolute signal does not then indicate proceed, train may proceed over TS Ry. crossing under provisions of Rule 776 without providing flag protection on TS Ry.

If absolute signal does not display proceed indication and red light is not illuminated in push button box after time release actuated, train may proceed only as provided by Rules 663(c) and 776.

Movement to Butchertown Spur

1. Press push button until amber light appears above push button.
2. SP. red light will be displayed immediately and electric lock released.
3. After 3 minutes, TS Ry. red light should be displayed indicating time release has functioned.

4. Reverse switch.
5. If absolute signal does not then indicate proceed on diverging route and red lights for TS Ry. and SP are displayed in push button box, train may proceed over crossing under provisions of Rule 776 without providing flag protection on TS Ry.
6. If absolute signal does not indicate proceed on diverging route and red lights for TS Ry. and SP are not illuminated in push button box after time interval, train may proceed only as provided by Rules 663(c) and 776.

Movement to Main Track

1. Press push button until amber light appears above push button.
2. After 3 minutes, TS Ry. red light should be displayed indicating time release has functioned.
3. SP red light should be displayed immediately or after an interval of 6 minutes indicating SP time release has functioned and electric lock released.
4. Reverse switch.
5. If absolute signal does not then indicate proceed, and red lights for TS Ry. and SP are displayed in push button box, train may proceed over crossing under provisions of Rule 776 without providing flag protection on TS Ry. and SP main track.
6. If absolute signal does not indicate proceed and red lights for TS Ry. and SP are not illuminated in push button box after time interval, train may proceed only as provided by Rules 663(c) and 776.

Instructions for operating emergency push buttons are posted in box adjacent to switch.

Biola Jct.: Westward absolute signal located on lead track governs movements as follows:

Top unit.......freight lead extension
Center unit......through crossover to main track
Bottom unit....Biola Branch

When lunar aspect is displayed in lower unit, trains may proceed on freight lead extension without stopping at restricted speed, expecting to find freight lead extension occupied by a preceding train.

RULE 781. White light which may appear on side of relay housing is maintainer's call light, but when train has been stopped by an absolute signal and white light is observed burning, members of crew will communicate with train dispatcher, even though another train may be seen approaching.

GENERAL REGULATIONS

RULE 825. Madera: Eastward through freight trains when stopping to set out, leave train clear of first crossing west of west switch and westward freight trains clear east siding switch.

RULE 827. Lathrop: Train No. 51 will be governed by the following: After stopping at Lathrop, forward brakeman will detrain and walk around entire train, making standing inspection, giving careful attention to running gear and journal boxes and entrain on station side.

RULE 830. Turlock: City ordinance requires that in event of fire alarm being sounded any train blocking Main St. must clear crossing immediately.

MISCELLANEOUS

11. Load limit (car and contents):

Lathrop-Fresno..........263,000 pounds

Unless authorized by Superintendent, heavier loads must not be handled.

13. LOCATION OF STOCK YARDS

Station	Capacity in cars
Modesto	6 (Water)
Turlock	6 (Water)
Merced	16 (Water)
Chowchilla	5 (Water)
Madera	9 (Water)

SPECIAL INSTRUCTIONS—MERCED SUBDIVISION

SPEED RESTRICTIONS FOR TRAINS: Maximum speed of trains in territory shown below is subject to further restrictions applicable to engines in the train as shown in SPEED RESTRICTIONS FOR ENGINES appearing on page 5 and MAXIMUM SPEED PERMITTED WITH CERTAIN EQUIPMENT, and OTHER MAXIMUM SPEEDS appearing on page 6 of Special Instructions for All Subdivisions. Speed must be further reduced as prescribed by speed signs, except as specifically authorized by Special Instructions herein, or by timetable bulletin.

All trains must run carefully during and after heavy storms, particularly when the track is apt to be affected. When fog, storms or other conditions obscure track or signals, speed of trains must be so reduced as to permit strict observance of signals and INSURE SAFETY, REGARDLESS OF TIME.

TERRITORY MP MP Column:	PASSENGER TRAINS 1	FREIGHT AND MIXED 2	LIGHT ENGINES 3
EASTWARD, LATHROP TO FRESNO:			
Thru switches and crossovers at Lathrop	25	25	25
On East leg of wye, Lathrop..........	25	25	25
92.83 to 93.07 (switches)..........	15	15	15
93.07 to 94.00..........	30	30	30
94.00 to 112.60..........	79	60	70
112.60 to 114.00..........	45	45	45
114.00 to 125.25..........	79	60	70
125.25 to 126.00..........	79	50	70
★126.00 to 126.30 (Turlock)..........	30	30	30
126.30 to 149.70..........	79	60	70
149.70 to 151.60..........	45	45	45
151.60 to 183.16..........	79	60	70
183.16 to 184.75..........	45	45	45
184.75 to 199.28..........	79	60	70
199.28 to 201.89..........	50	50	50
201.89 to 201.93 (thru turnout)..........	25	25	25
201.93 to 203.75..........	50	50	50
203.75 to 204.50..........	50	45	50
★204.50 to 205.50..........	20	20	20
EASTWARD, BIOLA TO BIOLA JCT.:			
199.93 to 208.62..........	40	40	40

TERRITORY MP MP Column:	PASSENGER TRAINS 1	FREIGHT AND MIXED 2	LIGHT ENGINES 3
WESTWARD, FRESNO TO LATHROP:			
★205.50 to 204.50..........	20	20	20
204.50 to 199.28..........	50	50	50
199.28 to 184.75..........	79	60	70
184.75 to 183.16..........	45	45	45
183.16 to 151.60..........	79	60	70
151.60 to 149.70..........	45	45	45
149.70 to 127.05..........	79	60	70
127.05 to 126.30..........	79	50	70
★126.30 to 126.00 (Turlock)..........	30	30	30
126.00 to 114.00..........	79	60	70
114.00 to 112.60..........	45	45	45
112.60 to 94.75..........	79	60	70
94.75 to 94.00..........	79	50	70
94.00 to 93.07..........	30	30	30
93.07 to 92.83 (switches)..........	15	15	15
East leg wye, Lathrop..........	25	25	25
Thru switches and crossovers at Lathrop	25	25	25
WESTWARD, BIOLA JCT. TO BIOLA:			
208.62 to 199.93..........	40	40	40

★Regulated by City ordinance.

Freight and mixed trains containing no restricted cars are authorized to operate at Column 1 speeds not exceeding 65 MPH consistent with local restrictions account grade and other conditions, provided trains:

1. Do not exceed 120 cars and 40 tons per operative brake; or,
2. When carrying 90 lbs. brake pipe pressure, do not exceed:

Number of Cars	Tons Per Operative Brake
70..........	60
75..........	59
80..........	58
85..........	57
90..........	56
95..........	55
100..........	54
105..........	53
110..........	52
115..........	51
120..........	50

SPEED RESTRICTIONS FOR OTHER THAN MAIN TRACKS	With Caution Not Exceeding MPH
Through sidings, yard and other tracks, wyes, balloon tracks, crossovers and turnouts, except:	15
Through slip switches..........	10
Through turnouts on other than sidings..........	10
On branches..........	10
On Spreckels Sugar spur, Manteca..........	10
On Winery spur, Madera..........	25
Freight Lead, Biola Junction..........	30
CTC sidings at: Irrigosa, Hotarb, Lingard, Fergus..........	25
CTC sidings at: Chowchilla, Arena, Alcant, Ceres, Covell, Calla..........	30
Butchertown spur, Modesto..........	10

SPECIAL INSTRUCTIONS—MERCED SUBDIVISION

RATING OF ENGINES—In Units of 2000 Lbs. (Tons)

NOMINAL CLASS	ENGINE NUMBERS	Lathrop and Fresno	Biola Jct. and Biola
DP-4, 7, 12	6000 to 6004, 6017, 6018, 6046 to 6054, 5900 to 5909, 5916, 5917	3400	....
DP-5, 6, 8 to 11	6005 to 6016, 6055 to 6064, 5910 to 5915 6019 to 6045, 5918 to 5924	3425	....
DP-13	6067 to 6068	....	....
DF-1 to 12	6138 to 6470, 8022 to 8305, except	3750	....
	with 61:16 gear ratio	....	....
	with 60:17 gear ratio	3000	....
DF-100	5200 to 5202	....	....
DF-101 to 108, 110, 112	4900 to 4902, 5203 to 5248, 5253 to 5278	....	5000
DF-109, 111	4903 to 4905, 5252	5000	5000
DF-114, 116 to 118, 120 to 122, 124, 125	5279 to 5293, 5308 to 5335, 5339 to 5444, 5449 to 5493	....	6500
DF-115, 119, 123, 126	5448, 5494 to 5507	7300	....
D-127	7000 to 7020	7700	....
DF-500, 501	4800 to 4815	....	....
DF-502	4816 to 4818	5900	5900
DF-602, 603, 605 to 607, 611, 612, 616	5600 to 5719, 5730 to 5844, 5872 to 5895	3950	3950
DF-608 to 610, 613, 614, 615	5720 to 5729, 5845 to 5871	4050	4050
DF-800	9000 to 9002	7625	....
DS-1 to 8	1000 to 1032	....	1635
DS-9 to 12	1033 to 1090	....	....
DS-100 to 109, 111, 115 119	1300 to 1441, 1464 to 1485, 1514 to 1528, 1551 to 1567	....	2450
DS-110, 114, 118	1442 to 1463, 1492 to 1513, 1539 to 1550	....	3200
DS-113, 117, 120 to 122	1486 to 1491, 1529 to 1538, 1568 to 1596	....	....
DS-200, 201	1900 to 1903	....	....
DS-500 to 506	5100 to 5120	2000	2000
DS-600 to 604	4600 to 4623, 4700 to 4703	3250	3250
DS-605, 606	4624 to 4633	3600	3600
DS-607	4634 to 4645	....	....

UNLESS AUTHORIZED BY SUPERINTENDENT, ENGINES WILL NOT BE PERMITTED TO OPERATE IN THOSE TERRITORIES WHERE NO RATING IS SHOWN IN ENGINE RATING TABLE.

EASTWARD FIRST CLASS		Mile Post Location	Timetable No. 278 April 28, 1963 **STATIONS** SIDING CAPACITIES AND FACILITIES	Station Number	Distance from Fresno	WESTWARD FIRST CLASS	
	52 San Joaquin Daylight					**375** Starpacer	**51** San Joaquin Daylight
	Leave Daily					Arrive Daily	Arrive Daily
	AM 9.19	92.9	Yd. Lmts. **LATHROP** YP	8978	112.6	AM 9.25	PM 3.18
		96.8	89 **MANTECA** P	9404	108.7		
		99.4	171 **CALLA** P	9407	106.1		
		103.3	66 **RIPON** P	9410	102.2		
		108.0	171 **COVELL** P	9416	97.5		
		110.9	98 **WEST MODESTO** P	. . .	94.6		
	s 9.48	113.1	82 R **MODESTO** BKYP	9420	92.4		s 2.53
		117.4	171 **CERES** P	9425	88.1		
	s 10.01	126.2	R **TURLOCK** P	9433	79.3		s 2.29
		129.6	171 **ALCANT** P	9436	75.9		
		136.4	40 **LIVINGSTON** P	9444	69.1		
		139.8	171 **ARENA** P	9446	65.7		
		143.2	40 **ATWATER** P	9450	62.3		
		147.4	171 **FERGUS** P	9455	58.1		
	s 10.26	150.5	R **MERCED** BKP	9458	55.0		s 1.51
		156.6	171 **LINGARD** P	9464	48.9		
		168.2	171 **CHOWCHILLA** P	9475	37.3		
		179.2	171 **NOTARB** P	9486	26.3		
	s 11.10	183.9	**MADERA** P	9491	21.6		s 1.17
		190.2	171 **IRRIGOSA** P	9497	15.3		
		199.2	128 **BIOLA JCT.** P	9506	6.3		
		201.8	TO-R **FRESNO YARD** BKDYP	1400	3.7	7.20 AM	
	s 11.45 AM	205.5	TO-R **FRESNO** BKDYP	1404	0.0		12.55 PM
	Arrive Daily		(112.6)			Leave Daily	Leave Daily
	52					**375**	**51**

Automatic Block Signal System

Centralized Traffic Control

Yard Limits

DT

EAST-WARD ↓	Timetable No. 278 April 28, 1963 Biola Branch **STATIONS** SIDING CAPACITIES AND FACILITIES	Station Number	WEST-WARD
Mile Post Location			Distane from Biola Jct.
200.5	Yd. Lmts. **BIOLA**	9308	8.1
208.6	**BIOLA JCT.** IP	9506 ↑	0.0
	(8.1)		

ADDITIONAL STATIONS

Capacity and Direction of entry into Spurs		Mile Post	NAME	Station Number
..	..	100.6	Bardi	9408
20	..	106.4	Salida	9414
6W	..	120.8	Keyes (Spur)	9428
20W	..	131.9	Delhi (Spur)	9439
21W	..	151.9	Creegan (Spur)	9459
33	P	160.5	Athlone	9468
..	..	163.3	Labranza	9470
..	.	165.8	Sierra Vista	9473
..	..	166.9	Minturn	9474
..	..	173.0	Fairmead	9480
50	P	176.5	Berenda	9484
25	P	186.7	Borden	9494
..	..	195.6	Herndon	9503
			BIOLA BRANCH	
..	..	202.5	Raco (Spur)	9310
..	..	206.0	West Acres	9313